THE CREST OF THE WAVE

Also by UFFA FOX:

SAILING SEAMANSHIP AND YACHT CONSTRUCTION

UFFA FOX'S SECOND BOOK

SAIL AND POWER

RACING CRUISING AND DESIGN

THOUGHTS ON YACHTS AND YACHTING

THE
CREST
OF THE
WAVE

by

UFFA FOX

Illustrated

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PREFACE

The Crest of the Wave was published in 1939 just before the war and now, almost twenty years later, Peter (my friend and publisher) has decided to reprint it.

During the years between, we have endured and won a war (if it can be called winning, for even the winner must lose in wars today) and full employment has sent up the cost of everything. Most things cost three times what they did before the 1939 war, but this book is only double and Peter has asked me to write a twenty year old preface to it.

I am a very fortunate man in that, from an early age, I have learnt to live every day as if it were my last. Therefore I have lived each moment to the full, tried to be just, kind and gentle and so enjoyed my days.

While still very young I realised that every age has its pleasures and therefore you must reach out and grasp those joys through the ages. Just as when a child I played and enjoyed children's games, so as I grew older I enjoyed boxing, cross-country running, football, ski-ing, in fact every kind of sport and pastime. As recounted in these pages, I sailed sliding seat canoes, a 14 footer, and an open whale-boat across the English Channel to the French and Britanny coast—voyages which I now undertake with the same zest and joy in my twenty ton cutter *Fresh Breeze*. I am grateful to the Lord for giving me this understanding of life and for enough enthusiasm to make these arduous small and open boat voyages in the years when I could take pleasure in them—for now, approaching sixty, although I could still do them, they would not be the same fun.

Therefore I would say to all youthful voyagers, plan and make your long voyages in small boats whilst you are young, as only while you are young can you enjoy them to the full, for one thing is as certain as day following night, that each day and night and every year increases our age, and the increasing years, whilst they may bring even greater enjoyment, take away from our strength of limb, our powers of physical endurance and enjoyment. I have enjoyed my past sailing and would not wish to alter any of it. I still enjoy sailing, but now my idea of enjoyment is in more powerful and sedater vessels.

For this new edition I have omitted the sections which dealt exclusively with racing in the original edition, so that it is now an account just of some of my more interesting cruising and passage-making experiences. Perhaps I may put together a similar volume of my early racing experiences later.

UFFA FOX

ACKNOWLEDGMENTS

The writing of the stories in this book gave me much pleasure, as it recalled many happy memories from the past. So it is with the illustrations. Everytime I look at the charcoal sketch of myself I think of the fun Rolf Armstrong (the artist) and I had while it was being made. Rolf was most anxious to have me laughing, as that was how he had seen me most, for we had spent many hours together (he was the champion canoe sailor of America the year before I was). Laughing to order was impossible for me, and so Rolf had to tell stories and anecdotes in order to get the laugh he wanted, and even when it came, he too was laughing and could not draw, so that the sketch took three times as long as it should have. But we both enjoyed it thoroughly, so this portrait will always recall Rolf's kindness to me and also the laughs we had together.

Beken's picture of *Avenger* with her prize flags brings back to me memories of the only season in which I have raced thoroughly throughout, and reminds me of all the loving care and thought put into *Avenger* that summer, for we looked after her like the thoroughbred she was. The full-length photograph of *Vigilant* is still for me rather a sad one, as it was taken just before I parted with her.

I feel that, besides acknowledging the debt of gratitude I owe to Rolf Armstrong, Frank Beken, and to my own camera for the illustrations in this book, I must, in thanking them with all my heart for allowing me to use their illustrations, thank them also for the memories these illustrations recall to me.

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Chapter I

EARLY DAYS

The greater our understanding, the more we are able to enjoy the things of this earth, and my apprenticeship enabled me to understand and love ships and the way of a ship at sea.

Like most other boys I wanted to be a pirate, smuggler, plumber, fireman, or clergyman, etc., but in due course all these things boiled themselves down to being either an engineer or a shipbuilder. In the end I naturally chose the building of ships and boats, and so the day came when I started my apprenticeship with S. E. Saunders in the Seaholme Shops. As at this time the firm was building the fastest motor boats and hydroplanes in the world, I could go to no better place.

The workmanship as well as the designs were second to none. Thus from the beginning I was taught that only the best was good enough, and from that time on I have always tried my utmost, for as we only go through life once, it is wasteful not to do one's best.

The very first boat I worked on was *Maple Leaf IV*, which with Tom Sopwith steering her wrested back from America the British International Trophy, or as the Americans called it, the Harmsworth Trophy. This has always been recognised as the senior trophy for speed on the water; in the past steam boats had been fast enough to compete for it, but by now the petrol engine had become reliable, and the saving of weight due to its ignition taking place in the engine itself made it faster than steam. From that time on the petrol engine and the hydroplane developed hand in hand.

In comparison with present day standards we apprentices had a hard time of it, for though only fourteen years of age I started work at 6.00 a.m., which meant rising soon after 5.00; with a break for breakfast at 8.30, and an hour from 12.30 to 1.30 for the mid-day meal, work went on till 5.30 p.m. But Saturdays soon came round, when we finished at mid-day, and almost every weekend saw me on the water in some boat or other.

I belonged to the Cowes Sea Scouts, and we had a sailing dinghy, a seven ton cutter, and a rowing and sailing gig. As the entire weekends and many summer evenings were spent in these three different boats, I soon learnt their capabilities and widely different characteristics.

In those days three of us boys, and I am afraid the three worst in the troop, Boko, Wopo and myself, were great pals. We were usually together, and almost always in disgrace, and because of all this it seemed to us we had the most fun.

The chief designer of Thornycrofts, Harold Lidstone, used to pass or fail us for our swimming and various seamanship badges. He was most kind to the three naughty boys in the troop, and would often lend us his 10 ft. rowing and sailing dinghy. I well remember one day when it was blowing a gale of wind, and Wopo and I sailed this dinghy up the River Medina. We knew her ways very well indeed; in squalls she could be eased by either luffing or slacking away the main sheet, and as we went up the river close hauled a competition started between us, the one holding the main sheet saying he would make the other luff, and the one holding the tiller saying that he would force the one with the mainsheet to ease it. Wopo was at the helm, and because he would not luff there could only be one end to it, for neither of us would give way. The result was that the boat filled; we swam around collecting the few things that were not lashed in her and then swam across with her to the lee side of the river, where we cleaned her up thoroughly, restepped the mast and set sail once more. This time, however, knowing that neither would give way, we sailed properly and after an hour or so the sail had dried out, so that we could go back with her all spick and span, just as we had left, as for once our naughtiness had not carried away any gear or done any damage at all, due to the fact that we were both good swimmers, and though only fourteen years or so of age had a thorough knowledge of salving waterlogged boats.

The August of 1914 found us Cowes Sea Scouts encamped up Beaulieu River with troops of Sea Scouts from all over the British Isles. We were a small troop in numbers compared with mainland troops, and though we were not much good at marching or parade work we were in the forefront when it came to sports and games, especially swimming, rowing and sailing. The only rivals that we feared on the water were the Portsmouth Sea Scouts with W. L. Wylie, R.A. in charge; it was never decided which was the better team of the two, for war broke out and camp was struck.

I still believe that the reason the Portsmouth and Cowes Sea Scouts were so good on the water was not only the excellence of their respective Scoutmasters, but the fact that the Solent with its many harbours, so varied and closely spaced, offers the finest ground one could have in which to learn the art of handling small craft. For the waters of the Wight have rocks, cliffs, mud, sand, shingle, every form of bottom, and the harbours range from the wonderful naval base at Portsmouth, and Southampton Docks, which berth the largest ships of the world, right down to such small creeks and havens as Newtown, Keyhaven and Bembridge, while the tidal streams vary from one to six knots. Though inside the Island the waters are sheltered, one has only to stand off from Culver Cliffs, or out through the Needles to be in the largest seas of the English Channel. All this was of course recognised many years ago, and explains why the Royal Yacht Squadron, the premier sailing club of the world, was born and has always lived at Cowes; and today, the waters of the Wight are still the finest training and testing ground and afford the most interesting racecourse round our coasts.

So from 6.00 a.m. to 5.30 p.m. I was an apprentice to shipbuilding, and evenings and weekends an apprentice to the sea, except for two nights a week which were taken by evening classes in Naval Architecture and Mathematics. I enjoyed my Naval Architecture classes, for the chief draughtsman of J. Samuel White & Co., Archer Brading, was in charge, and as he had boys of his own, younger than myself, besides having a great knowledge of ship construction and design, he knew that boys were only boys and accepted the fact that I could not help being a naughty one.

During my apprenticeship I went through the various shops, so that by the time it was over, in spite of the wasted time caused by being in the Naval Air Service during the 1914-18 war, I had worked on hydroplanes and motor boats of all kinds and descriptions, and on all sorts of Government work, including gigs and whalers. I spent a good time building the National Lifeboats as well as all kinds of surface craft, flying boats, seaplanes and aeroplanes, all of which was followed up by work on large steamers, trawlers, torpedo boat destroyers, etc.

It will be seen that none of the vessels on which my apprenticeship was served were sailing yachts; but living on an island, a great deal of my spare time was spent sailing, and much of my leisure was devoted to the study of a sailing vessel and her ways. Of course, since my home was in the country, I took my dogs shooting through the winter, and played football and cricket, for it is bad for a boy to develop one sport only; but even at that early age I realised that while football, cricket, cross country running, boxing and such sports and games were no end of fun, the time would come when I should not have the strength of limb for at any rate the more strenuous of them, whereas I knew that I could sail till time with me would be no more; and I suppose because of this my love for sailing grew deeper and deeper as the years went by.

Though very young at the time, I have always carried in my mind a picture of Queen Victoria's funeral. Osborne had been her last home, just as Cowes was the home of that most famous of yachts, the King's *Britannia*. On still winter Sunday mornings when the sun shone kindly I would climb the tall fence of Marvin's Yard, just clear of the spot where it had been tarred to prevent us boys from climbing it; I would go down and quietly admire the hull of the *Britannia*, and because I was so young, I thought, as I gazed at the perfection of her hull, both in shape and workmanship, that this lovely vessel which had already seen three sovereigns of England, Queen Victoria, King Edward VII and King George V would endure for all time. All this came vividly back to me, when, years later, she was launched for the purpose of being sunk off the back of the Wight. There were very few of us there to see this last sad launch, but a crowd of schoolboys on holiday from London manned the capstan to haul her down, and as she floated off the cradle the master in charge asked them to give three cheers for the King's *Britannia*. Ted Woodland the foreman of the yard, who had cared for her for forty years and more, and I were standing on the Pier Head together, both feeling sad at her departure; those cheers jarred my senses, and I knew they had done the same to Ted Woodland when he turned to me and said 'This is the first time I have heard a cheer at a funeral.'

Now *Britannia* has gone and little remains of her but memories and various parts of her that those of us who loved her cherish.

In my drawing office there is one of her bunks, in which I often sleep when I have to be at work very early the next morning, while her gaff jaws are in another corner, and in my private office I have a photograph of her framed in one of her mast hoops. These relics will always bring back to me vivid memories from my youth. Little had I thought, as I admired her hull in my choir-boy days, that one day I should have the joy of steering her; but time went on, and of all the boats I have sailed I never steered one that spoke to you through her rudder as *Britannia* did, even though by then she was changed to wheel steering.

My apprenticeship rolled on till one day I launched the first boat I built for myself.

The first vessel I set out to build was never completed, and it happened this way. When I was fifteen my father gave me a fine oak tree growing 75 yards from the house on condition that I grubbed it up by the roots, and so I drew out the plans of a 20 ft. waterline centreboard cruiser to suit this tree.

The butt was to make the main keel through which the centreboard was to work, while her stem was shaped to suit the great curved branch. The various crooks were to be hanging knees, and the main deck beams would be swept out of the more gently curved branches. All this planning took me through the autumn, then when winter came and the sap had gone down out of the tree I started work digging out the roots and lopping off the branches above them, for it is said that if a branch is broken or cut off a tree, the root going out underneath it should be cut and dug out too to balance the tree, for the roots of an oak go out underground as far as the branches do above.

It was very hard work using a cross axe, pickaxe and graft digging out these roots, but finally only the tap root was left, and I clapped a tackle high up on the oak. A gang of friends came on to it, and we hauled the tree down, but that root did not give until the top was only 20 ft. or so above the ground, then with a crash my oak was down. The next job was to line the wood out, rear it up in the air and borrow pit saws to saw out the keel, stem horn timbers, etc., and after many weeks of hard work the main framing was ready to set up. But by this time the 1914 War was well under way, and it was almost impossible to buy copper, and even if I could have done so, it was beyond my small means. So this cruiser was abandoned, her main keel having a sad end, for, sawn in halves, it made two gate posts, which are still standing, and still swing a gate twenty-four years after.

I felt very sad over this, my first attempt at building a vessel to take me to sea, for even more than the abandoning a job after months and months of thought and work was the sad thought that I, a young boy, had destroyed a beautiful oak tree that had taken some hundreds of years to grow, and through all those years had stood every gale that blew and had afforded security for nesting birds.

I then bought from S. E. Saunders the first hydroplane he ever built, on condition that I broke her up. Her bottom, which was double diagonal, I used as a scrieve board, but her topsides in wide mahogany planks I cut down, and with this for planking built a 16 ft. by 2 ft. 9 in. sailing canoe for cruising, as, being smaller, she was an easier and quicker job, but even so took many months of spare time to build.

In her I sailed a great many miles, and perhaps just one small week-end cruise will give an idea of the pleasure she gave me.

On this particular Friday there was a dance, which I had to attend, and so in the afternoon I sailed her from Cowes round to Gurnard Bay where I could rejoin her and sail straight away after the dance. It was high water at midnight, and a smart northerly breeze was blowing, so I had rather a job launching her from the lee shore, though the Solent at this spot is only three to four miles in width; but once I had paddled her clear of Gurnard Ledge buoy I lowered the forward and main dropkeel to its full extent, and set both main and mizen, and was soon reaching down the Solent on a starboard tack at quite a good speed, and with the ebb tide to help me made short miles of it out through the Needles across Poole Bay into Swanage Bay, where I anchored and cooked and had my breakfast, after which I paddled her ashore and went for a ramble among the Tillywhim Caves.

The northerly wind still continuing decided me on sailing round the south side of the island back to Cowes. So I went aboard and set sail on a course for St. Catherine's, and though there was quite a sea for such a small craft she held her course dead true, for once her after centreboard was down it was difficult to get her off the course she was on. The two centreboards being so far apart made the boat extremely steady on any given course.

Those who know the beauty of the Isle of Wight, as seen from the sea, can imagine the joy I felt once past the Needles, as I reached along in the smooth water under the lee of the island for St. Catherine's in the little canoe I had made for myself, for generally in this world we are fighting against the elements, but here the elements were working for me. The wind was just abaft the beam, the sea smooth and my little craft, which I had designed and built myself, was carrying me without any effort past scenery which I knew and loved.

Coming through Rocken End Race off St. Catherine's I stopped my dreaming, for I had to look after the canoe with every nerve alive and alert as the seas were steep and dangerous for such a little boat. Her very smallness had one advantage, however, that I could take each wave exactly as I wished, and so she came through safely and we were soon on the beach at Puckaster Cove, where I decided to spend the remainder of the day and night. Her dropkeels were arranged to give sleeping accommodation between them, while for a length of 5 ft. most of the deck could be lifted up, and this with canvas sides formed a cosy cabin.

After hauling the canoe up, rigging the cockpit tent and cooking and eating my big meal of the day, I walked the five miles into Ventnor, saw some friends and then walked back to Puckaster Cove to sleep aboard the canoe. It was wet scrambling down over the steep hill and cliff that night to join the canoe, while St. Catherine's light was swinging its wide blinding beam round and then leaving me in pitch darkness.

After a night's sleep I got under way again, but now the wind had gone into the south-east, and there was too much of it for the mizen, which was stowed and the mast lashed down on the deck. Sailing her across Sandown Bay to Culver Cliff was very exacting and exciting work, for she was going so fast on this close reach that she cut her way through the seas and seemed more under than on top of the water. Once Culver Cliff had been reached, and I could bring the wind abeam, so that she was not diving into the seas, she lifted buoyantly to each and, though sailing even faster, was quite dry. After Bembridge Ledge it was a free run home with the island to break the worst of the seas. I could sit in her and steer with the rudder bar, and was able to set the mizen off Ryde, and so finish my week-end cruise with full sail, arriving in Cowes on Sunday night, having had my lungs filled with good clean sea air, and feeling quite content and fit for the week's work, which would start on the morrow.

Other times this little canoe would travel in the davits of a friend's yacht to be launched when we arrived at a port where she could be used by myself. So this my first boat brought me so much contentment and happiness that I knew I could never forsake the sea.

As well as this, though still quite young, it brought home to me the fact that many of us on our journey through life are content to drift along and let our fate shape itself, whereas by a little strength and determination we can do a great deal towards moulding our future. If a boy by thought and work can alter and shape his own leisure hours, so a grown man can alter and shape his future life if he only puts forth the energy to do so, and I remember the clergyman who, having praised a countryman's garden and then listened to him explaining just how he had brought about this state of perfection, said to him, 'But surely you should give some credit to the Lord'; to which the man replied, 'Why bless you no, you should have seen the state this ground was in when the Lord had it all to himself.'

The time had come when I had to decide on my future. Through my apprenticeship I had been a rover as far as work went, but in this world today a man has to be a specialist to arrive on any job, and I had to make up my mind just what form of shipwright's art would give me the greatest pleasure. I had the choice of going in for big steamships, racing motor boats, sailing yachts or flying boats and seaplanes, and as I knew by then that the designing and building of sailing yachts, racing and cruising, would give me the greatest pleasure, I fixed on them. Believing that in order to be successful in the making of anything a man must first of all have a clear knowledge and understanding of the thing and all its ways, what it can do and what it cannot, I decided to sail a distance equal to that of going round the world in the small yachts that I hoped to be successful at designing and building. To complete my apprenticeship and education, therefore, I set out to sail that distance in all types of small craft, and from a great many cruises in a great variety of vessels I learnt things that can only be found out that way. I hope that the following pages, while giving a picture of the happiness I derived from sailing, will also teach lessons and prove helpful to others.

Chapter II

THREE ATLANTIC PASSAGES

1. TYPHOON

Typhoon *was 35 feet on the waterline, with a draught of 6 feet, and had 950 sq. feet of sail area in her ketch rig. She was designed by William Atkin for William Washbourne Nutting, and was built up in Nova Scotia, from where she had sailed to England with a crew of three aboard in the summer of 1920.*

Seamen are made up of deepwater men and coasters, and until I met *Typhoon* and her owner I was a coaster only, not having sailed off soundings; so *Typhoon* gave me perspective, which, like humour in life, gives a sense of proportion and balance.

Bill Nutting and Billy Atkin were both on the staff of *Motor Boat*, a New York magazine, and if we remember this fact when we think of *Typhoon's* lines[1] they do not appear so unbalanced. The easy hollow bow and the powerful stern are typical of motor boats, which tend to squat by the stern through the propeller kicking away the ground or rather the water from under their quarters. *Typhoon's* lines, every time I look at them, bring to my eyes a picture of two sailing men, lovers of sail, made through force of circumstances prisoners in the offices of a Motor Boat Journal, and while there, being unable to stifle their love of sail any longer, they break out with a sailing boat, which to appear in their paper must bear a strong resemblance to a motor boat. And the fact that when I met her she had already crossed from Nova Scotia to Cowes in 22 days and had sailed the ocean part from Cape Race to the Bishops in 15 days 9 hours, balanced the ends far more in my eyes than I then realised. *Typhoon* arrived in Cowes early in August 1920, and my troop of Cowes Sea Scouts badly wanted me to take them aboard to see her and her crew, but I could not very well take fifteen or twenty youngsters over a stranger's vessel without some reasonable excuse, and it was not until the end of that month that one came. We heard that *Typhoon* needed two more to make up her crew for the homeward voyage via the trades to New York, so as I wished to be one, and Charles Hookey, one of my boys, who was 6 ft. 2 in. overall, wished to be the other, I took the troop aboard, hoping that the owner would look upon us favourably as candidates for his crew and upon the troop much as he would upon an engine in a steam launch, and not mind.

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[1] See my book *Sailing Seamanship and Yacht Construction.*

We found an owner who was kindness itself, and the only excuse we needed was that we were fond of sailing and the sea. Ever since, when feeling shy, I have remembered this and have just dived into rooms full of people, rather like diving into the sea for a swim, knowing that if I had to wade in slowly I should lose my breath and run out frightened when there would really be no need, for the sea and human nature are naturally kind. Both however are alike in the fact that, although naturally kind, liberties must not be taken with either, for then the serene brow becomes ruffled and trouble is found.

And so we visited *Typhoon* in our whaleboat, and I asked Bill Nutting if I could make up his third man, and if he needed another Charles Hookey would be that man. . . . All the troop would have liked to go, but we were the only two that could.

Then next morning I told my family I wished to sail back to America in *Typhoon*, and my father argued with me. *Typhoon*, he said, was an unbalanced boat with her hollow weak bow and her broad stern. I said that she had already crossed the Atlantic, and he was not impressed; for, he said, if you threw a box overboard in North America it would cross the Atlantic and be unable to help itself coming to England; and he warmed up to September gales, and the storms of October and November, from which I gathered he was against my starting.

So I went aboard again that evening with the gang, and Nutting said better not come; he wanted me to, I wanted to, my father did not want me to. So the only thing to do was to toss up. And it came tails, so I passed the penny to the youngest in the troop, and the next two came heads so all was settled. . . . Years afterwards Harry Partridge told me the other two calls came tails too; hence we learn that the right thing to do is that which you want to do.

It was now late, so as all my gear was aboard the schooner *Black Rose*, in which I had been cruising, we started for Hamble to fetch it, and there being no wind this meant a fourteen mile row in the whaler, and we arrived back aboard *Typhoon* at 3.00 a.m. Then the skipper fed us with soup, and off we went home to bed at 6.00 a.m. or rather to collect the rest of the gear.

So it was that the last day of August found *Typhoon* ready for sea with her owner and Charles in one watch and myself and Jim Dorset in the other, the owner delighting me by giving me charge of that watch.

Those of the troop who could came down in our racing gig to say farewell, and we left Cowes at 1.00 p.m. for New York, under a 7½ horse power one-lung Diesel; and at 3.00 p.m. we were still without wind, roaring through Hurst with the engine peacefully quiet. Engines to me seem just like that; they behave perfectly well until really needed and then they drop peacefully to sleep, and here we were with every chance of being swept on the shingles by the fierce ebb without an engine. Auxiliary power in a sailing vessel does not receive the attention it should have, and the result is that it is often unreliable. However this case was soon remedied, for it was the stuffing box overheated through being set up too tightly, and easing it off and throwing water over it enabled us to restart the engine and stand over towards the Island shore and safety, with the ebb tide. On the flood the tide sweeps towards the Island, and vessels should keep near the shingles then.

By 4.00 p.m. we had cleared the Island, and outside the Needles we found a westerly wind making, which by 6.00 was enough to enable us to set sail and steer S.W. by W.; but by dark the wind had fallen away, and we kept the engine going all through the night until 4.00 a.m. the next morning, September 1, when there was enough wind for sailing. However this faded away for two hours from 8.00 till 10.00 a.m., when it came in again quite strongly, and at 4.00 in the afternoon we had all we could stagger under with full sail.

At 5.00 p.m. we put two reefs in the mainsail, and three hours later we stowed it entirely, as by now it was really blowing hard. Myself, Jim and Charles were all seasick, so as the skipper was on watch we stretched out in bunks feeling rather small.

At 4.00 a.m. I turned out and discovered everyone turned in, and *Typhoon* steering herself under her headsail only, while away on the port bow was the glow from two lighthouses, which later we found were on a small island to the east of the Ile de Batz (the Sept Iles). And so sitting steering *Typhoon*, with the French coast in sight, there was time to think quietly over everything. Here we were, four of us crossing the Atlantic, three of us very young and seasick, and a kind-hearted skipper who, rather than disturb our slumbers, had taken the mizen off *Typhoon*, hung a riding light in the rigging, and turned in with us when he felt tired (so the log read between the lines) with the English Channel full of shipping.

It took but a few seconds to realise that when it came to weather our vessel could stand far more than we could, that we three youngsters were the weak links in the chain, and that our too indulgent skipper would let us sleep when we were under the weather, all of which was very humiliating. So three hours later, while the owner cooked the breakfast, I explained my thoughts and feelings, and he agreed that it was far better for his crew to feel dreadfully seasick than humiliated. . . . And that never more, if it were humanly possible, would *Typhoon* be left alone with the night.

At 10.30 a.m. we reset the mizen and steered S.W. along the French coast, which gradually gained on us, as with the wind ahead we could not weather the point ahead, Ile de Batz. After trying to fight our way to windward in vain for three hours against a strong wind and steep sea, we decided to go in, and away we went between two lighthouses on rocks and ran aground on some mud—it seemed to be the only piece of mud amongst masses of rocks.

The log read 172 from the Needles, and we thought and hoped that the town we saw across the masses of rocks was Roscoff, for having only a small scale chart we were not sure of our position; and as long as no harm comes of it (as it easily can) there is more fun in cruising on a strange coast with a very small scale chart, as then one feels something of the doubts and fears that beset the earliest explorers.

The young flood was making, and there would be no difficulty in kedging off; so the dinghy was launched and I was detailed off to buy food. Not speaking French I took a paper plate and a pencil to draw sketches of the food we wished to have and as drawing is the oldest and most natural form of language I returned triumphant, if stony broke.

The town was Roscoff, and there was a fine little harbour in front which dried out at low water. So we cooked and enjoyed an excellent dinner, and afterwards sailed into the harbour in the twilight and moored alongside the stone quay. We walked through the unlighted streets and then to bed with the feeling that we had an interesting town to wander over the next day. And so ended the night of September 2, 1920.

We spent four days alongside the stone quay. We had our halyards ashore to a ring bolt to prevent *Typhoon* falling outward, but they were never used, it being a far better plan to shift the anchors across the deck and place them amidships on the side nearest the wall, thus giving *Typhoon* an inward list. If we had depended upon the halyards they would have needed tending with the rise and fall of the tide.

These four days were pleasantly spent, visiting the town and its church, and all the while a strong westerly wind made the beat to Ushant uninviting. But at noon on September 6 we put to sea with full jib and mizen, but a two-reefed mainsail, as although the wind was easing there still seemed plenty. Having studied the approaches to Roscoff at low water we sailed out without hitting any of the many rocks.

The wind held strong and ahead till midnight and we tacked along the rocky coast towards Ushant, quite happily catching mackerel, which made our fish course for dinner that night, but after midnight the wind started to fade away and by 2.00 a.m. we were slatting about in a glassy swell with the sails sheeted flat to try and prevent their slamming too hard.

Hell is supposed to be paved with good intentions, but according to Bill Nutting it is paved with glassy ground swells, and this being a new idea of hell's pavement to me, I was first of all tickled and afterwards much taken with the picture, for surely there can be nothing more damnable than slatting about in a heavy swell, which throws the boat about in all directions without rhyme or reason.

We were becalmed for 36 hours, and then a faint breeze came out of the north-east and by 2.00 p.m., Wednesday, September 8, we were sailing with a fair wind at 2 to 3 knots. As it was foggy we decided to go outside Ushant, for although the fog was very patchy it might not be clear when we wanted it to be, and with strong tides the passage inside the island is difficult in fog.

At 6.45 we saw a wondrous sight, several rocky islands appeared as though in the sky, and then with startling suddenness two bright flashes appeared in the sky immediately overhead, for we had nearly run into the bottom of Ushant Light in the fog. So we cleared Ushant for the run across the Bay with no need for cross bearings at all, a good departure, if a startling one; and ever since, when thinking of Ushant or hearing it spoken of, the picture of those two bright flashes in the sky above comes to my mind's eye very vividly.

With the wind astern we lashed the mizen to its weather shrouds and ran wing and wing for the corner of Spain, 300 miles across the Bay, which was very delightful. A small boat hammering her way against a strong wind is wet and uncomfortable, but when chasing away before it she is a different vessel, sailing upright and dry and lessening the force of wind and sea by giving way to them, whereas close hauled she increases the power of wind and sea, to the discomfort of those aboard. September weather with its easterly winds made the Bay of Biscay a pleasant place.

One night the wind was very strong though fair, and to ease up *Typhoon* we stowed her mizen after putting two reefs in the mainsail, and even with her jib and a double reefed mainsail she was driving along as fast as she could go, and seas were sweeping over her continually, the largest in my watch coming clean over the mizen boom, which was stowed in the crutch. These were not the steep unstable waves of the North

Sea, but huge Atlantic seas that gave a small boat every chance to rise to them because of their size. But that hard easterly wind only lasted the one night, and by 10.00 a.m. next morning we shook out the reefs in the mainsail and set the mizen, as the wind was taking off, and by 4.00 in the afternoon we were becalmed only 10 miles off the coast of Spain. We had been steering for Cape Ortegal, but through haze this was invisible. All through the night we were becalmed and fog persisted in hiding the land, and it was not until next morning that the breeze came fitfully and settled down to a light wind from the west, enabling us to steer south, close hauled on the starboard tack.

At 9.10 a.m. as I had the deck and was steering, there suddenly appeared the lacework of breakers at the base of rocky cliffs, so I yelled delightedly 'Land on the starboard bow,' and as we were less than 400 yards off we stood on to about 300 yards off, and came about. As we only had small scale charts we could not see anything to tell us our position, and so the morning was spent very pleasantly tacking along westwards close to the mountains, with the heavy swell breaking on rocks or yellow beaches at their base, and a fog that hid the tops of the mountains and only revealed half their beauty—a fine game and very fascinating trying to decide where we were after several days out of sight of land. Round a headland 1,000 feet high at least and still onward we tacked, and then round a cape with a lighthouse. We decided it was Cape Prior as the lighthouse was about 300 feet in the air. All day we had seen little fishing boats popping, it seemed out of the very face of the cliffs, but on going closer there appeared a little bay, and at 5.00 p.m. as the night was coming on and the weather was thick, we sailed into a tiny bight and anchored for the night. It was a delightful anchorage; the Spanish fishermen boarded us with presents of their red vino, lobsters, and some snake-like shellfish, which grow on rocks and on ships' bottoms, these last dreadful looking things to eat, but they shouted instructions as to how we should cook them, which we never understood, and after many mistakes and corrections we managed it in the end. They were very rubbery to chew, though tasting good.

Then we gave them whisky, and not being used to such powerful stuff they dropped off to sleep, and we only put them into their own boats at midnight by main strength. Those fishermen had had what I've since heard described as a good party. They slept all night in the open, for their boats were rather like our sea scouts' whaler, open and double ended with a large dipping lug; and there is no doubt that sleep and fresh air was what they needed.

Next morning at 8.30 a.m. we set sail and continued our beat to windward to Ferrol, whither we were bound, and although we gathered both from the fishermen and the direction of the coast line that we had not yet passed it, we could not tell how far away it was.

By noon we were becalmed close under the high steep cliffs, with the Atlantic swell roaring and breaking 60 feet in the air at their base; and it was not till 3.00 p.m. that a steady westerly wind set in, and soon we rounded a rocky point with a lighthouse, and there stretched before us invitingly a deep channel or fiord with mountains enveloped in the fog on either side, and we sailed in with an ever freshening wind astern, which, clearing the fog away, unveiled the land of Spain. There is no doubt that the Lord is a great scene-shifter; never in my life before or since have I seen such a dramatic unveiling of so beautiful a panorama. It was not done suddenly or hurriedly, but with majestic stateliness, and the eye had just time to take in and explain one scene when another appeared.

And so we entered Ferrol at ever increasing speed until we dropped anchor under the walls of the dockyard that built and fitted out the Invincible Armada; for it was from here that it sailed, and Ferrol is still the Naval Port of Spain. Our log read 455 miles from Roscoff, which showed that in spite of September being the month for easterly winds, we had had to beat against westerly winds for a considerable part of the passage.

Almost before our anchor had reached the bottom the British Vice-Consul's son was aboard. He was very keen on sailing, and he and his father looked after us well and made our short stay very interesting. The Vice-Consul, being a musician, had collected the music of the hills of Spain, and he played it on his piano with great feeling; shutting my eyes, I could hardly believe that I was not in the Highlands of Scotland. There was the same energy and abandon in the music that made the feet itch to be on the move, and the same strange wild beauty. I imagine it to be the effect of the hills upon generations of people, and it is strange how, though thousands of miles apart, you find the same things the world over. On Chesil Beach the fishermen have single thole-pins fixed on the gunwales of their boats and a half-round piece of wood fixed to the loom of the oar drops over the pin, so that they do not have to unship their oars when hauling in lines or going on the beach. This device disappears by the time one is across the weather side of West Bay, but here in Spain is found exactly the same thole-pin and oar.

We chose to dine that night at a very old sailors' restaurant in a room full of Spanish fishermen, who smoked and sang to the guitar. Our choice was sound, for it is generally more fun to be with men who work hard, as when they play they play hard, because their play has been well earned and they enjoy it the more keenly. We thoroughly enjoyed being with them, for we, at our play with the sea, had worked hard too. Then late that evening we wandered round the town, which in the cool of the night was energetic, and for the first time I saw and heard a young Spaniard make love to his sweetheart on her balcony. Instead of being as I'd pictured it, a romantic and pleasing scene, it was a very uncomfortable one, for although he and she did not seem to mind our walking along past them, for they kept going, and although we understood nothing of what was said, we felt that we were listening to words meant for his lady love only. And I wonder when the people who make moving pictures will understand that so many of us avoid them because they show love scenes at which the spectator is only about two feet off, and, knowing that the love birds would dislike us watching, we stay away.

Next day Mr. Martin, the Vice-Consul, invited us to the launching of a trawler and having seen quite a number of launches I was not really interested until we arrived, and there I saw staged the most daring launch imaginable. Instead of the usual twin ways for bilge blocks, there was nothing; the trawler had a single centre way down which she was to slide into the water. The way was steep and deep water close in, but the idea that she would be afloat before she had time to topple over sideways was startling to me, brought up to dry docks and safe ways, on which a ship could spend months half or quarter floated if she wished. As the time for launching drew near I found myself getting very excited and agitated, wanting to clear the people back; but restraining myself I walked about with my hands in my pockets hoping no one would see how nervous I felt. Then the priest did his job and the bottle was smashed, and down she slid on her centre way with a man on either side running along holding up the bilge, and as swift as light she was in the water. We all agreed that the only adequate comparison was that of a seal sliding and diving into the sea. For it was a very graceful and swift launch. But very daring. Then we saw the *Grangetown* discharging coal she had brought for the Spanish Navy. Men shovelled coal into baskets, which women carried on their heads walking in an endless chain, and the job itself seemed endless. When they saw me they rather fancied my white flannel shorts, and being bashful I ran away, which highly amused them.

We left Ferrol at 2.00 p.m. on Sunday, September 19, after a stay of five days, and with a smart breeze took two hours to beat down the fiord or loch to the entrance of Corunna Bay. There the wind fell away, and it was not until after dark that we anchored in the harbour, being almost run down just before 8.00 p.m. by a large steamer leaving the port. We had no side lights up. In watching the changing lights and colours as the day gave way to night we had not realised how completely the darkness had fallen. Outside, the breaking spray rose eighty feet into the air as the Atlantic seas hurled themselves against the rockbound coast of Spain. Somehow we did not wish to go ashore that night, and felt quite contented aboard cooking and eating our dinner, while we watched the lights of the town, wondering what it held for us on the morrow. Drake had burnt Corunna, Sir John Moore was buried there, there the Armada had sheltered, and it was rather enjoyable thinking these things over before going ashore; and so we turned in. The next day we visited a bull ring; there had been a fight the day we had arrived, and instead of seeing bulls killed we saw the sword that had killed them still uncleaned and black with blood. We saw the butcher's shop where the bulls are prepared for the market after they have been killed, and it seems only a matter of time before the spectators will be eating sandwiches of the bull killed in the fight ten minutes earlier. Simply a matter of speeding up the cooking. About 4.00 in the afternoon we set sail for the Azores, and at 6.00 p.m. after tacking out we weathered Point Hercules, steered west to clear Sirgasas Island visible 20 miles away, and at 11.00 p.m. were abreast the light on the island, with the Hercules light dropping below the horizon aft, and Villano rising above it farther down the coast. But our course to the Azores now took us away from Spain into the open Atlantic.

We were only doing 3 knots, the night was peaceful, and, as I had the deck to myself there was nothing to stop my thoughts wandering. Our voyage was not unlike a man's voyage through life; with increasing years he goes from the joys of his childhood and boyhood to those of his youth and manhood, each year seeing new joys found and the old ones outgrown, and with the new joys, to balance them, greater cares. The blot made on a clean page of writing that brought a tear of self pity to the boy would mean nothing to the grown man, able to erase it skilfully with rubber and knife. I felt that being twenty-three I was as *Typhoon* off the Sirgasas Light; for she was dropping Hercules astern, and although raising and for a time guided by Villano Light, she was headed out into the open Atlantic, the parting of the ways; and I was just emerging from my youth into the joys and cares of man's estate. Soon I should no longer play football, or take part in cross country running, and boxing would become too strenuous, so I must now consider sports that I could continue with a fair chance of success until I had reached the age of three score and ten, and I decided to try and plan my life so that I worked very hard through the winters and then left the summers for sailing and cricket, two things I could play at until the end. And so my watch alone on deck passed all too quickly.

I have often been asked what we did to while away the night watches, and have recalled my thoughts through that watch to try and explain why it is that long voyages in a small sailing vessel are so fascinating once she gets off soundings. There is beauty in the sky at night and in the day, for the Lord is the greatest artist and shifts His scenes with great effect, and when He is not in the mood to show the beauty of the heavens, the man on deck has time to reflect and think. And although this was my first Atlantic crossing in a small sailing vessel, I have since crossed it in two others, and always reached the journey's end with a feeling of regret. For although the might of a heavy gale is frightening, the peace and charm of the ocean is beyond understanding, when it is in its quieter moods.

Next morning, Tuesday, September 21, the mountainous coast of Spain was still in sight over our port quarter, and the wind increasing with the day increased our speed. The wind was E.N.E. and so fair, as it should be in September; but the sea was increasing also, and Charles and I were seasick. Unfortunately for me, after a spell on the nice steady shore I am always sick for a day or so when I start to sail the heaving seas until broken in again. About 5.00 in the afternoon a heavy squall hit us and Jim and myself took in the mainsail in about two seconds, and reset it after the squall had passed. With these heavy squalls about we divided into two watches, so that one man was always ready to stow the mainsail. Squalls give warning, for a heavy black cloud can generally be seen even at night unless the light of the cabin or binnacle deadens the helmsman's eyes; and *Typhoon's* small mainsail and short main boom made stowing or reefing no more than a single-handed job, which was a great comfort. So for twenty-four hours we looked out for the heavy squalls and stowed the mainsail for each, resetting it directly after. It was blowing quite hard between whiles, for as we left Spain the seas were going over the steamers we saw; they, of course, were headed into the sea, while we were chasing away with a fair wind, but we could well have had a reef in the mainsail.

The wind eased off by September 23, and we set the spinnaker and took in the mizen, and still continued on our way happily and peacefully with moonlight nights full of beauty. On the night of the 23rd the skipper cooked the dinner, and very good it was; but at 1.00 a.m. Jim woke me by hitting me on the nose with a shoe remarkably well thrown for one doubled up with indigestion.

So, after getting the castor oil and the instruction book out of the medicine chest, I went to the wheel while the skipper took Jim in hand, and the improvement made by Jim as the skipper advanced with the castor oil had to be seen to be believed; it brightened up the night for quite half an hour afterwards.

It was my watch then till 5.00 a.m., when a really good sunrise was developing; and as artists are unable to paint the sunrises and sunsets seen from small sailing boats in the ocean, a word picture can hardly be expected to either, so I will only copy out the few words set down in my diary at the time, hoping that, however inadequate, they will recall beautiful dawns to those who have seen them.

'5.00 a.m. Sun still down under cold blue bank of clouds, then orange streaks that turned into vivid red later, extending from east to north. Red sky in the morning may be the sailors' warning but I enjoy beauty while I may. Dawn and Sunset are the most beautiful parts of the day. Rout out Charles whose glum face spoils the picture, I point out the dawn but he can see no beauty in it. Simply asked me to get him a biscuit. "Breathes there the man with soul so dead." Expect it is all because he is not yet awake, so turn in on deck as one hour of sleep there is worth two in the cabin.'

We had a peaceful day, as the wind was taking off all the while, and that night, not wishing to be disturbed by Jim's indigestion, I cooked the dinner, boiled potatoes, fried corned beef, spinach, onions, and a peaceful night followed; the skipper entered the fact that it was a good dinner in the log.

The next day we were becalmed, and at 10.45 a.m. Charles, who was washing up the breakfast things, gave an excited yell that startled us below, for Charles is not easily excitable, and expecting to see a tidal wave, a waterspout or a sea serpent climbing in over the bow we rushed on deck, to see none of these things, but a little land bird, like a waterwagtail, but yellow and not in the least afraid of man for he was trotting about within a few inches of Charles. The bird was thirsty, as he tried to drink water on the bobstay but was unable to for the plunging of the bow, so we gave him some water and crumbs, and then, quite at home, he inspected the ship and went below, flying and walking all over the boat, having a bath in a teacup, and generally settling down. At 6.30 (sunset) Charles was sleeping and the bird turned in beside him, tucking his head under his wing within two and a half inches of Charles's nose; an impressive and inspiring sight.

We made a nest for him in an empty oatmeal box and he turned in there later. When daylight came next morning, Sunday, September 26, we found our little bird dead and were all very upset; at first we thought we would bury him, and then thinking he'd be happier in the sunshine floating on top of the water, I sealed him up in a jam bottle, and with a card inside telling of his faith in human nature, we set him free to wander over the waves. Strange how we had taken to that little bird, blown four hundred miles off the land and how sad we were at losing him. When men are alone with nature in mid ocean, their thoughts grow simple and kind.

Yesterday we had seen large schools of porpoises, one with at least two hundred in it, and to see them jumping clear of the water in batches of fifty or so on their way due south was to realise how many fish there were in the sea, and how perfect they were, for these porpoises, about six feet long, were travelling at 30 knots or more, which is an astonishing speed for their length. By noon we were becalmed, and about a quarter of a mile away lay a floating object. Full of curiosity I swam towards it. When almost to it I saw a ripple, and although of all the fish we had seen that day we had not sighted a shark, I immediately thought of sharks and started to swim back to *Typhoon*, which now looked miles away. The skipper yelled to know why I had turned without seeing what I set out for, and though feeling very frightened I made once more for the object. It turned out to be a barrel covered with weed a foot long, and without a second glance I turned tail for *Typhoon* and swam as fast as I was able, feeling an imaginary shark at my feet all the while. We had shot at them with an express rifle quite a lot, for we towed our dish cloths astern on a string to wash them and the sharks used to snap at them; if we were going any speed they missed, for a shark's mouth is on its under side, and to bite things floating on the surface it has to roll over on its back, and generally loses speed in so doing.

The next day, Monday, September 27, we were still becalmed, and spent the day swimming, painting and varnishing *Typhoon*, and replacing worn gear. It was very peaceful with *Typhoon* just fanning herself along, when at 2.00 p.m. we sighted three masts ahead, and altered course towards them. Three and a half hours later we spoke the *Marjorie McGlashen* of St. John with a load of salt fish bound to Malaga.

She had had no wind for six days. We passed each other bound in opposite directions, and as we were then doing 2 knots we soon separated, and at sunset, 6.00 p.m., she was some way off. The sun set right ahead, and as it went down the moon came up dead astern, rather wonderful the big red ball of fire going down ahead and the full yellow moon rising astern, both in sight for some time. A fine picture for a circular room in a lighthouse, the sun setting on one side and the moon rising on the other, with the red light from the one toning into the yellow of the other; perhaps the only way a picture could be painted correctly to show both the sun and full moon at once. Next morning the moon dropped into the sea ahead while the sun rose astern. *Typhoon* had sailed herself all through the night, but at 4.00 a.m., the wind increasing rapidly, she had to be steered, and at 6.00 a.m. we had to double reef the mainsail, and three hours later had to take it in entirely, for by now it was blowing hard. With the south-west wind ahead we could steer W.N.W., and *Typhoon* was very uncomfortable. Driving into a heavy steep sea she smothered herself, and cooking was impossible. Just before dark we stowed the jib and mizen, and hove her to under *Dolly Varden's* trysail, which Tom Ratsey had given to *Typhoon* just before she left Cowes. We three youngsters were seasick, and as the trysail was easily handled by one and sails were my job, I set it in the intervals between my violent eructations, and am afraid that I messed the sail at times, but the seas soon washed it white again. *Typhoon* rode from four to eight points off the wind, from closehauled to wind abeam, and was quite quiet throughout the night taking really heavy seas aboard about once every half hour, till 8.00 a.m. when a tremendous rain squall knocked the heart out of the wind, and it rapidly fell away. Then suddenly it flew into the north and blew as hard as ever again, but this wind was abaft the beam, so we took in the trysail, and setting the jib and mizen, started on our way once more. In a very short time the seas grew to an alarming height and *Typhoon* was continually swept. The skipper taking the noon sight was almost swept away. Salt water did not seem to hurt the sextant, and by now it was used to shower baths of great force.

Our position was still 300 miles from San Miguel, as we had on this part of our cruise either too much or too little wind. On one day without wind we did 2½ miles and on the previous day with a gale 21¾ miles.

In the afternoon the wind eased, and we set the double reefed mainsail. While the skipper cooked the evening meal with a blow lamp, it eased off still more, and I shook out the reefs, leaving the wheel for short intervals to do so. By 10.00 p.m. the night was perfect, with the moon just past full sailing through a fairly clear sky.

Thursday, September 30, came in with a clear crisp breeze and bright sunshine, and breakfast was a joyful meal, but then the wind fell away to nothing and *Typhoon* flopped and fell helplessly about in the old sea during my watch, and it was very depressing. However, the wind came again from the north-west after two hours and we eased the sheets, which had been pinned in to save slatting, and once more sailed. By now the seas had smoothed out into long hills and valleys with almost a quarter of a mile between the crests.

Just before dark we put a single reef in the mainsail as the weather looked dirty, and in the course of the night we had often to lower the mainsail for heavy squalls, resetting it again when they were over.

At 9.45 a.m., Friday, we shook the reef out and enjoyed good sailing weather, sunshine and a brisk breeze, our sights putting us 150 miles to the east of San Miguel, the largest island of the Azores, which was under half an inch long on our chart.

Another day of perfect sailing weather, and suddenly Charles at the wheel yelled 'Land Ho', and there on the starboard bow was the faint outline of the volcanic peaks of San Miguel; for we were on the latitude where the earth's crust is thin, and volcanoes are frequent right round this belt of the earth. We had been two hours under twelve days sailing our 850 miles to make this landfall, three days longer than we should have been, and food was getting low, paraffin oil had run out, the wind was dead ahead and freshening, so that we had a hard beat to windward in store.

As the sun set at 6.00 p.m. Charles sighted land on the port bow, which we believed to be Santa Maria. By 9.00 p.m. we were, we thought, close to the Formigas rock, and accordingly sailed *Typhoon* so close to the wind that she only moved through the water at about 2 knots, while we waited for the moon to rise and lighten our darkness. The skipper and Jim kept this watch, for though we only had one in a watch at sea we had two in soundings.

At midnight Charles and I took over and no lights showed from the two islands we had sighted; but as soon as the moon broke through the clouds San Miguel was visible only about 10 miles away.

By 12.30 the wind and sea had increased so much that we had to put two reefs in the mainsail, and perhaps a description of the method used to reef this 480 sq. ft. sail in a heavy wind and sea will be interesting and instructive. It must be remembered that at frequent intervals throughout the job *Typhoon* was being swept from end to end with seas running three and four feet over her decks, and those below were being thrown up on the deck above, or rather left up there as their bunks dropped away from under them.

The main sheet was eased, so that although there was enough wind in the sail to keep the boom from being thrown about violently there was not enough weight in it to cause hauling down the reef earings and points to be hard work. The tack was hauled down and made fast, then the outer earing hauled down and the main part of the job was complete. In hauling down the tack I had to slacken off the throat halyard—the peak did not need touching—and so with the two earings lashed down the reef points could be tied; in the dark care had to be taken to tie the right ones and to tie them with the same strain on each. Here the advantage of having some weight of wind in the sail showed itself, for it was in the position it would be when sailing. Had the mainsail been loose-footed the tying of the reef points would have been easier. The whole reef only took about ten minutes, and there is no doubt that the reefing of a ketch's mainsail is a simpler and easier job than the reefing of a schooner's.

The sail is in the middle of the boat where the motion is least, and even with the sheet eased slightly the end of the boom is still inside the rail owing to the beam of the ship at this point, whereas a schooner's mainsail generally extends over the stern of the ship, and there is the wheel, helmsman and cockpit to fall over and into. So although past experience had left me satisfied that the schooner's was the best cruising rig, now, after reefing *Typhoon*, the ketch rig seemed to me the easiest and most desirable. Such is the influence of a contented mind.

In three-quarters of an hour the wind and sea had increased still further, so that the mainsail had to be stowed entirely; with only her jib and mizen *Typhoon* was over canvassed, and hit the seas, which were very very steep, so hard that the skipper and Jim were unable to sleep at all below.

Sunday, October 3. At 6.00 a.m. the skipper and Jim took over, and by this time we were within 5 miles of the island and should have been in smoother water, but the seas were steep and confused and reminded me of Portland Race with a spring ebb tide against a S.W. gale, but on a larger scale. The seas were irregular and so steep that we hardly made any way against them, although with our jib and mizen we had all the sail set *Typhoon* could carry, and we were continually swept with seas.

It was now daylight, and the sight of the green fields and white houses and the strong smoky smell of the land made us long to be ashore. As there would be no sleep below Charles and myself did not think of turning in, but thought that four on deck could tack *Typhoon* and set the mainsail whenever the wind eased for a while.

But though from 6.00 till noon, six hours, we fought in full daylight to get *Typhoon* just those five miles to the land we could not do it. We tried to tack her under jib and mizen only, and as often as we tried we were frustrated by the seas, for the moment the drive was taken out of the sails *Typhoon* lost what little way she had. We set the double reefed mainsail, and she lay down till the water ran in the companion way. Then at noon in a last effort to get her on the other tack we gybed her, and the seizing on the mizen shrouds gave way, and though we were at last on the other tack we had carried away our mizen. So we stowed the mizen and jib and hove to once more under *Dolly Varden's* trysail, finally settling down below at 2.00 p.m. Eight hours we had been trying to tack that last five miles, without food and wet through the whole time; in fact Charles and I had been wet through for fourteen hours, as we had just completed our six hour watch when this struggle began.

And so I sat thinking over a vessel with a ketch rig again, and listening to the arguments for it, the greatest of all being that in bad weather she will handle and balance under jib and mizen. And so she will, but when the weather is damned bad she will do nothing under them, neither will she under mainsail alone, and she will not stand mainsail and jib even if the mainsail is well reefed, for all the drive is too far forward. This was of course an unusually hard wind, for it was October and the equinoctial gales were about; when we finally reached port we found eight large steamers sheltering there, some with boilers shaken loose, and all eight with one trouble or another.

We lay hove to from 2.00 p.m. Sunday, till 8.00 a.m. Wednesday, when the wind having eased we set the double reefed mainsail, and soon after we shook out the reefs and at 10.00 a.m. set the jib and steered S.W., hoping to sight San Miguel by dark.

At 4.15 p.m. Charles, who seemed to be great at landfalls, sighted an island on the port bow, which we took to be Santa Maria, and fifteen minutes later he apparently discovered more land in a mass of cloud on the starboard bow, but we were not sure that this was land at all. Then with sunset came a calm, which lasted all night; and was succeeded at daybreak by baffling light airs from all points of the compass; later wind came out of the north about noon strong enough to give us steerage way, then backed to north-west and we slowly made our way towards Santa Maria. By sundown we were only four miles off, and gradually drew inshore through the deepening gloom. We had no chart and were not really certain of the island's identity; even if it were Santa Maria our chart was no guide; no lights appeared ashore to help us except one swinging lantern moving over the face of the mountain, probably carried by a farmer to light him on his way. The roar of the surf and the cries of thousands of birds made the night eerie, and we dared not approach any closer, so we stood off-shore again, making short tacks along the coast in search of a cove, or at least what appeared by the chart to be one. Just before pitch darkness set in, finding a low place in the hills above, we thought it must be our cove, so after standing to in four fathoms we let go the anchor, seventeen days from Spain. We were completely out of food, so that we could not help turning in on empty stomachs, wondering what we should find when daylight came.

Friday, October 8. On waking, we found that the houses we had seen the night before and thought empty as no lights showed were occupied, with terraced gardens behind them, and that the town was alive. So we rowed ashore, directed by yells as to the way in through the rocks and surf, and soon our dinghy was hauled high and dry by the inhabitants, all wondering what sort of vessel it was that had anchored off their town in the night. The island was Santa Maria, and the town San Laurenco; walking up its steep main street we all discovered that we were not very stable on our legs, and that they did not seem very strong, in fact we felt like invalids out of bed for the first time. The people were kindness itself, and made us eat and drink before we were allowed to speak. Without knowing how to thank them we fell to, and after we had fed were shown the wonders of the island. The terraced gardens grew grapes for wine, almost every house having its own wine press; one had a still in which the owner made a powerful brandy. The red and white church was two hundred years old, fires were lit with flint and steel and the pith of a plant for tinder, bread was baked, as it still is in parts of Norfolk and Suffolk, in stone ovens, a fire being first lit in the oven and then raked out, and the bread put in and cooked by the heat held in the stones for several hours. There was so much to see that our brains could not grasp it all, and at 3.00 p.m., after provisioning, we left. The townspeople would not accept payment for anything and came down in a body to bid us farewell. Soon we were away with a double reefed mainsail, for the S.W. wind had set in strong again, but with the darkness it fell away to a calm, and we spent the night rolling helplessly. Throughout the morning we were becalmed, with occasional catspaws from different directions, holding just long enough to move *Typhoon*, and then dying away again.

But in the afternoon a breeze came, and we sailed towards Ponta Delgada, which with all the island of San Miguel had been in sight since daybreak. By sunset we were only three miles from the breakwater, and feeling our way in with the lead we anchored in the harbour just off what we took to be the public landing, and turned in for the night.

We spent ten days at Ponta Delgada as there seemed so much to do, and so many people to visit and dine with that the work proceeded pleasantly if slowly. Our anchorage was just off the inner harbour, where we found a three-masted double-ended lateen-rigged trader which had sailed in just before dark ahead of us. Long parallel lines—she was sixty feet overall and had a crew of twelve—made her fast and easily driven. When we had looked over this interesting vessel her crew came aboard *Typhoon* and showed an equal interest in her. We had already passed the Customs and the Doctor was quite satisfied with our papers. So far there had been no trouble at all with harbour authorities, who all seemed to do their utmost to help us. A walk over the town soon tired us out, and we wondered if the climate of the Azores was the cause, or if it was due to the fact that we had not used our legs much for some weeks, or if it was the complicated money system that really laid us low; for there were two sorts of money on the island, the mainland Portuguese milrei being worth five of the island's milreis, so there was weak and strong money and we never knew which was which.

We had anchored to a 60 lb. kedge; this was unfortunate, for the warp chafed through on the hard rocks below, and *Typhoon* blew ashore. Her deep heel aft striking first, she swung round stern to the wind and waves, so we ran out the main anchor from aft in the dinghy and hove her off as she lay, and she hung that way so nicely that we left her so. That night it blew a gale, and though we were inside the end of the breakwater her stern pounded on the short steep seas in a frightening manner. With no mizen we did not dare sail off, and the engine refused duty, so we spent a night moored stern to the waves with the rocks close aboard to leeward. In the morning we swung her round on her anchor, and tried to sail her off. We set the mainsail, and then hauling in hand over hand on the anchor ran her over it with quite a bit of way on, broke it out cleanly, and settling the jib stood farther into the harbour on the port tack. But we could not weather the rocks to leeward, so we stayed her and then stood out of the harbour on the starboard tack. We tried to tack her again before clearing the harbour, but she would not stay, and after several attempts we anchored, not having gained an inch to weather. Then a tug came along, and we gratefully gave him a rope, with which he towed us into the harbour. We might easily have gone out to sea again and spent days getting back. The skipper and I had an argument that night about double enders. I had taken an unfair advantage the night before, for with *Typhoon* hammering her stern hard into every sea he had had to admit our position then was a case where a pointed stern boat would have been happier.

We moored up alongside the *Independent Bridge*, and she lifted out our mizen mast, off the heel of which her carpenter cut two feet. It was then restepped. It only remained to shorten the shrouds, and as these were double with their eyes on the deck it meant shortening one eye only and shifting the seizing at the hounds. . . . The carpenter also made two new cheeks for the hounds, and these he morticed deeper into the mast, and clenched on with a copper bolt through the two, which made a much stronger job than the screws had before.

Having repaired the mast we had to put our supplies aboard for the passage to New York. Food was scarce on the island and none could by law be taken away, so we had to resort to smuggling.

This was a humorous job. The four of us loaded our pockets with eggs, and then proceeded down the crowded streets. We had gone carefully and with infinite skill for about one hundred yards, when the skipper said 'damn' under his breath, and walked even more uncomfortably than before. This amused us so much that we all began laughing, only to turn silent one by one as we each broke an egg or so, when it was the skipper's turn to laugh. And so we made our way to the quay laughing at each other's discomfort. The crowds we passed through wondered at the cause of our mirth. When we finally arrived at the boat we had difficulty in climbing aboard not only because of the eggs, but because we were weak through laughing so much. After this only one went for eggs at a time.

We bought 100 lbs. of beef and a bag of flour off the *West View*, a steamer in for repairs, and had to smuggle this aboard under cover of the dark nights, for there were soldiers on every ship as well as along the quays to watch out for such things as food passing between different vessels. What with one thing and another it took time to provision *Typhoon*, but at last we were ready, and then Manson Dillaway, a lawyer from Boston, said he would like to join us for the passage home, which brought our numbers up to five. So we sailed away from Ponta Delgada, where everyone had shown us the utmost kindness, and all the large steamers blew their whistles as we cleared the harbour, a tiny ketch no larger than their lifeboats. Their parting whistles moved us all deeply, so that we could none of us look at each other or speak. 'Parting is such sweet sorrow.'

The skipper said he would like the first watch, and as we knew how he was feeling we all turned in and left him alone with his thoughts and *Typhoon*, guessing rightly that he would take a much longer watch than he should, for by now we had begun to realise each other's thoughts and moods, and so knew that the skipper would enjoy the night.

This was the night of October 19, 1920. With the wind westerly *Typhoon* sailed close hauled down towards the North East Trades on a course S.S.W. ½W. By midnight the wind had increased and was still increasing until 1.00 a.m., when we took the mainsail off her, and she sailed on under jib and mizen for twelve hours and then at 1.00 p.m. we set the mainsail once more.

Next day October 21 the wind backed into the south-west and we put about and lay west on the port tack. At 7.30 p.m. that night the wind fell away to a calm, and we flattened in the sails to prevent slatting, but the next morning brought a strong breeze from west-south-west, and we steered N.W. by W. until 3.50 in the afternoon, when the wind backing into the south enabled us to steer W.S.W. But soon the breeze died away and at 6.30 p.m. the engine was started. The clutch, however, would not grip, so the engine was stopped till daylight; 'Allah be praised' for, with that running below, sleep was difficult and uncomfortable. An engine on a sailing vessel should be put in a watertight, fireproof, soundproof and smell-proof room of its own.

Saturday, October 23 (next morning), we started the engine at 10.00 a.m. and away we went at 4¾ knots until three in the afternoon, when the stuffing-box was so hot the engine had to be stopped, and restarted after a two hour rest, when it ran for 13 hours until we stopped it, for a breeze was making. We set sail and steered west with a south-west wind at 6.00 a.m.

As the day grew the wind increased. Towards nightfall we put two reefs in the mainsail, and by midnight it was blowing so hard that we took it in altogether. It was a dirty night, *Typhoon* being continually swept by seas, and those below had no rest, for the motion threw them up on to the deck beams. A heavy rain squall knocked down the seas and also eased the wind slightly in the early morning, and at 9.00 a.m. the mainsail was set, but the wind flew into the north and blew so hard that we stowed it again in a hurry. Then at 4.30 in the afternoon we set *Dolly Varden's* trysail, which with the jib and mizen gave us 6½ knots, a speed quite fast enough for the sea then running.

We carried along under this rig for 24 hours and then in the afternoon of October 26 we set the mainsail, for the wind was north-east and steady, and we hoped we were in the Trades. The mainsail increased our speed, so that we were now doing 7.4 knots right on our course. And from now on life on board became very pleasant. The Trades sound nice and settled, but they are full of squalls and blow quite fresh; being fair for our passage, however, little water found its way below, though the lee scuppers were generally full.

And so we settled down to a pleasant life, steering, cooking and eating meals and smartening up *Typhoon*. Everything was peaceful till sunset on November 2, when we stood by for something to happen, for the sunset had a wicked look. At 6.45 p.m. a squall hit us, full of heavy rain, which practically knocked *Typhoon* on her beam ends, although the mainsail was half down. During the few minutes the squall lasted we stowed both mainsail and mizen. After it was over we reset the mizen, but did not hoist the mainsail till noon next day, for the squalls followed each other in rapid succession. Then on November 4 the wind came ahead and blew very hard, so that the skipper and I reefed the mainsail, then the mizen and then the jib. The water in this latitude was quite warm, so we did all the reefing and wet work without any clothes on at all, so that they were dry or fairly so to put on afterwards. Although reefing her was a single-handed job it was much easier with two and more fun, as there was someone to laugh with.

The wind veered from west to north-west, so we tacked late in the afternoon, and steered West ½ South. Then at 7.00 p.m. the wind fell away, so that at 9.00 p.m. the engine was started, and ran all through the night.

Noon November 5 (next day) the engine gave up the ghost, and expecting it to take some time to start, we all dived overboard and it started immediately. Charles, the skipper and myself managed to scramble aboard before *Typhoon* gathered way, but we had to swing her round in a circle to pick up Dillaway who looked like being left behind. After another two hours under power the circulating water stopped, and so as a breeze was making from the west we stopped it and set sail steering N. by West. Our position now was Lat. 33·23·16, Long. 53.06 so we were getting towards New York.

For three days we had head winds and heavy squalls, and light winds between the squalls, so our progress was not fast. Then came another three days of calms, squalls, head winds and engine starting and stopping, so that the afternoon sights of Wednesday, November 10, put us about 800 miles from New York in Lat. 33·48.02 and Long. 60.15.15.

Although this part of the voyage does not seem long, it is a part where heavy gales are to be expected in November. Everything, however, was fairly quiet till the night of November 12, when at 9.30 p.m. the wind piped up so strong that we had to stow the double-reefed mainsail entirely, and all through the night *Typhoon* drove close hauled into a heavy head sea.

Our good weather was over; we were out of most of our best food and had been making all sorts of unleavened bread and weird cakes with the flour we still had, but now we could no longer use the coal stove, which warmed and dried and kept *Typhoon* sweet below, and instead had to cook by the primus in gimbals, with the cook lashed on to his job, so violent was the motion.

On November 13 we were struck by a very fierce squall, and for over two hours *Typhoon* with only her jib had all the sail she could stagger under. It blew with great force from the west, then south-west, then north, and finally settled into a hard north-east wind, when we set the mizen again. The seas grew rapidly, and to make matters worse were very confused, for the shifting winds had blown hard enough to cause cross seas, but *Typhoon* doing her six knots under jib and mizen made the best she could of it, and we were fairly comfortable, if wet.

In the middle of the afternoon we sighted masts ahead, and soon saw there were three, which we took to be those of a three-masted schooner coming our way under shortened sail, but we could not understand why she was so long drawing near. Then we lifted her hull above water, and at first she seemed to have no sail set at all, but later on we saw that she was hove to under her two inner staysails and her well-reefed mainsail, and although she was so snugged down she was first lifting her bow out of water so that we could see clear under her forefoot a third of her length; then pitching down as though bound for the bottom. It needed all hands to take two photographs of her. Charles steered while Jim, Dillaway and myself contrived to hold the skipper on as well as protect the camera from the spray and seas that were flying over us. Three men in oilskins on her quarter-deck were so surprised to see such a small boat sailing while they had had to heave to, that they did not return our cheerful wave. Or possibly they thought us such damned fools to be under way in such a seaway that we were beneath their notice, for there was no doubt that seamanship and common sense pointed to heaving to, but our food was almost exhausted and we could not afford the delay.

Towards sunset the glass started to rise and we decided to carry on through the night under jib and mizen; and by 9.00 a.m. next morning (Sunday, November 14) the wind had eased enough to set the mainsail reefed, when we increased our speed to 7 knots. Then the wind shifted about before settling down to a light easterly breeze that only gave us 4 knots. We were grateful for this light fair wind and the consequent easing up of the motion; the breaking seas gradually became less formidable, and because it was now cold we lit the stove to dry and warm *Typhoon.*

The wind remained moderate to light throughout Sunday, but on Monday morning it freshened from the E.S.E. In an effort to increase our speed we set the spinnaker, but it carried away, and so we were content with the full mainsail, the mizen having been stowed as the wind was aft, rendering it of little or no value.

The skipper's sights on Monday showed that we had made good three hundred miles in the three days of heavy weather, which he thought was disappointing, but which I thought good, for really we should have hove to and made no progress at all.

Tuesday, November 16, came in with another hard gale from the east, and we lowered the mainsail and set the jib under which *Typhoon* ran for some hours; but at 10.30 a.m. we were afraid that the jib would not last much longer, so we bent *Dolly Varden's* trysail and stowed the jib. We put extra lashings on the dinghy, stowed sail and generally prepared *Typhoon* for the severest weather, for we all felt that the gale coming was to be much heavier than anything we had yet encountered. The work was exacting and dangerous, for *Typhoon* was flying through and under seas that were very heavy and strong, and generally Charles held me like a vice while I stowed and lashed sails; and although he several times hurt through his excessive force, the very pain gave me confidence to work quietly on without fear of being washed away.

That afternoon Charles took the wheel over from me at 3.00 p.m. *Typhoon* was careering along far too fast for safety; on top of the seas she would begin gathering way and then rush down the face of the wave at an alarming speed; every sea that caught her lifted her stern high just before she began this mad rush, and this was the moment the helmsman had to anticipate, for in it lay the whole secret of taking her through that weather. At such moments, with her high buoyant stern in the air, she had no steerage way, since although she was travelling quite fast the breaking crests of course travelled faster; the rudder had no grip, yet she must be poised exactly right for each downward swoop before it actually began, or she would broach or gybe. I sat by Charles to explain this nice point, and he steered under my direction for some twenty seas, after which I went below feeling he had mastered the situation. But it was apparently not so, for no sooner had I shut the sliding hatch than we broached, and went over on our beam ends. Half expecting this to happen I was not really surprised, and grasped what was happening in a flash. *Typhoon* went over to 90 degrees, and then righted slowly. There was no time to be frightened before she was up again, so the whole thing seemed funny instead, until I thought of Charles, and was afraid he'd been washed away; but looking through the port I saw him looking so puzzled and worried, that he looked funny too. And I roared with laughter.

A page or so from my diary written at the time will I believe paint the picture more clearly than words written afterwards.

'Tuesday, November 16.

'6.00 a.m. Lacing of main gaff carried away. Blowing hard. Charles at wheel calls me.

'6.10. Wind backs E.N.E. blowing harder. Half lower mainsail and hoist jib. Blowing and raining like old Nick. Jim came up to lend a hand and went below to get dry and warm when we had half lowered mainsail. W.W.N. (skipper) woke as Jim was casually dressing. He heard the wind whistling and the mainsail flapping and got wild (we all do when hungry). He chewed Jim up and then rushed forward to me and banged me on the nose with his elbow. Good job I was there or he might have gone overboard (motion of ship pretty bad) but my nose brought him up. Asked him if he'd hurt his elbow, he said "a bit" and thought it was the mast he'd hit till I explained afterwards.

'We doused and secured the mainsail in crutch.

'10.00 a.m. Been running under jib since 6.10 a.m. W.W.N. at wheel thinks wind too much for jib and that it may carry away. Heavy sea.

'10.30. Jim, Charles and I got out and half hoisted trysail to blanket jib, which then stowed. Oilskins no good as every now and then I went under. Usually up to my waist as standing on bobstay. Jim asked me once if I'd hurt myself as a sea banged me against the bowsprit. I replied "No, but I've given myself a hell of a twist," as I noticed that my oilskins were on the wrong way round. And then told Jim and Charles the story of the workman, who was late up and dressing in a rush put his trousers on back to front without knowing it; he dashed off to work and was no sooner on the scaffolding of the house he was helping to build than the scaffolding collapsed. When picked up and asked if he was hurt he said "No," but looking and seeing his trousers back to front added "But I've given myself a hell of a twist." Jim and Charles were holding on to the mast, and I was on the bowsprit, so had to shout the story, don't know if they heard it or not but Jim laughed at the right time, but this may have only been his politeness. W.W.N. at the wheel getting impatient, so take time hoisting trysail; would like a penny for every time I've answered his anxious enquiry with "Nothing broken only a wheel come off,' a bad habit rubbing people the wrong way. It is rotten of me for W.W.N. owns the ship, and is responsible for irresponsible kids like Jim and myself.

'Sheet tackle got adrift as we were hoisting trysail so Charles held on to my feet, I leant overboard for it. Charles has altered since the gale off San Miguel and is now the busiest man on the ship.

'After we'd finished putting extra lashing on the dinghy I undressed and standing up in the rain in the cockpit bathed with real soap. W.W.N. was amused and said "Well, you intend to go to your maker clean anyway."

'And I replied, "Well, if we do weather this lot I'd be angry at wasting this nice rainwater." Heaviest wind and sea we have had. W.W.N. at wheel is having a strenuous time, she is a good little ship, wonderful the way she stands up to this wind and sea. Sincerely hope the schooner we passed is all right.

'3.10. Charles relieved me at wheel. Seas worse, which seemed impossible five hours ago: everything can be worse, but it is not very comforting, when after losing thirty bob, a friend tells you it is better than losing sixty.

'We got knocked down with our masts in the water. I'd just taken off my oilies when with a bang we went over to port. I grabbed the table and Dillaway's bunk, he just managed to stay in it. Jim dropped from his bunk on to W.W.N., who was lying on the port seat. Jim had an amazed expression as he cleared the ditty box on the dresser. I wanted to laugh, hadn't time to get frightened before she came up. Suddenly thought of Charles and looking through the port was relieved to see him sitting at the wheel with a very worried and puzzled expression on his face. There was the cockpit full of water, and our empty kegs floating about with the last of our salt beef. Charles looked exactly like Robinson Crusoe on his raft just leaving the wreck. He looked so funny that I laughed, which made W.W.N. wild as he had just discovered his pyjamas covered with fuel oil. Then we had a heated argument, the skipper and I (raised voices but could not wave our arms as we had to hold on either end of the table) about boats' sterns. I believe in pointed sterns and the skipper in broad sterns.

'She is a wonderful boat but I think she'd be more wonderful if she had a canoe stern, or a stern like a Scotch fishing nabbie.'

After we had finished our argument, neither side convincing the other, the skipper took the wheel. By now it was dusk, and to make steering easier we trailed two long lines astern, which steadied her as she was on top of the seas. The difference in steering was so great, that we decided to run on through the night rather than heave to. This was at 4.30 p.m. At 9.30 p.m. the wind fell away quickly, and then we had a salvo of hard squalls from all directions, one close on the heels of the other.

Next morning (Wednesday, November 17) at 3.00 a.m. the skipper and I gybed her by lowering the trysail, and then setting it again on the starboard side. There was a chance of taking out the mast or bursting the sail in gybing with it set. Then we hauled in one of the two lines astern as the wind had eased. The skipper steered till 7.00 a.m., and then Jim took her for two hours, then after my two hours the skipper took her another two. From 7.00 a.m. till 1.00 p.m. the wind had increased, and was still increasing; the new sea making up over the old was heavier and more confused than the sea we had before encountered, and it was still increasing, while the wind blew harder than ever in a succession of vicious squalls. The tops of the seas were blown off, and the valleys were streaked with spume and spray flying across like snow before a gale. The sting of the spray could be felt under oilskins, and we had already streamed our second rope astern, this time bent on to a heavy iron pail, otherwise no helmsman on earth could have steered *Typhoon* for five minutes. As it was, two hours of it had us all dead beat. With the rising wind and the seas increasing so quickly, not only in size but in steepness and unevenness, the skipper decided to heave to, and we prepared the Voss type sea anchor below, as it was easier to work there than on deck, and then took it to the cockpit to rig, with Charles sitting and lying on it as the wind tried to lift it out of the boat, when it would have blown away to leeward and perhaps turned into a kite. The sea anchor warp was already rove through a fairlead on the bowsprit end to the cockpit, so we had only to drop it over from aft and all would be well.

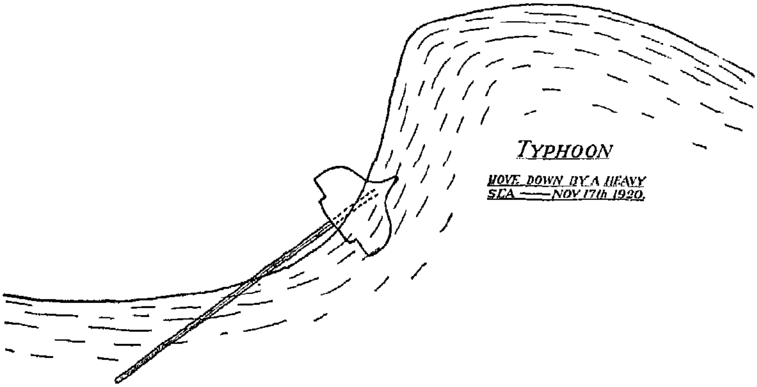
So we were all ready: Dillaway was to pump bilge water and oil out with the bilge pump, Jim and I were to lower and stow the trysail, then make our way aft and help Charles stream the sea anchor, while the skipper steered. And Jim and I were to put lifelines on, for by now the seas were thundering down on *Typhoon* with alarming frequency and weight, but although Jim and I said 'Yes' to the skipper, we foolishly disobeyed orders and did not put them on, feeling that they would hamper our movements. I went first to the mainmast to gather in the trysail halyard and get it all ready to lower before Jim left the cockpit to join me for the actual hauling down of the sail, which we thought would stick in that wind; for all our halyards and ropes had been swept off their belaying pins and were trailing overboard and astern like the arms and legs of an octopus.

As soon as I had coiled the halyard, I signalled to Jim to come forward. He had just climbed out when one heavy sea came, but he held on to the mizen and I to the mainmast for that one, which was the forerunner of another with tons and tons of water, which broke aboard us from an enormous height. That sea towered above us like a church; in moments like that the size cannot be judged accurately, for the brain is too excited, but to me it looked to have a face that was practically vertical, but with the top overhanging, like an overhanging cliff, and the top seemed to be thirty feet above us, and we had already climbed about fifteen feet from its base. So there *Typhoon* seemed to me to be climbing the face of a plumb cliff, and when she had climbed fifteen feet the other thirty feet crashed down on her. It was pretty grim. Jim, who was half-way between the two masts on his way forward to me, with only the handrail along the deck house to hold on to, had no chance at all and was swept off. I had my legs wrapped round the mainmast and a belaying pin of the spider band in each hand, and held on for a fraction of a second. Then I seemed to be swept miles and miles, and the mainmast came down and hit me, so clutching it grimly, I hung on, and slowly at first, *Typhoon* righted (for she had been knocked on her beam ends and past). I was lifted out of the water, and found myself clinging to the hounds. Sliding to the deck I gave a heave at the trysail, and it came down as sweetly and as easily as though there had been no wind at all.

I then rushed aft to help Jim who meantime had caught one of the ropes we had trailed astern, and had been hauled alongside as *Typhoon's* way slackened. Our struggle to hoist him aboard will always live in my memory. It seemed hours before we three could hoist him over the rail, and it was not until the skipper had put a heavy boathook under him and prised down on it, using it as a handspike, which raised Jim to the level of the rail, that we slid him in to safety.

Jim was pushed below, and the sea anchor streamed.

But first of all it burst its spreaders, and then the warp carried away, and we fell away again broadside to the seas. Lashing down the trysail heavily, and making things snug on deck, we went below and left *Typhoon* to her own ways; it was the best thing we could have done, for she seemed quite happy, though about every half hour a heavy sea would thunder down on to her decks and shake her throughout her whole length.


TYPHOON
HOVE DOWN BY A HEAVY SEA —— NOV 17th 1920.

Down below she was in a dreadful state. The inside ballast had burst the floor boards, and, striking the chart case, had slid into the corner of the coach roof; the ashes from the stove had also found their way on to the coach roof, which showed how far *Typhoon* had rolled over. The shortness of her masts and the outside ballast on her keel had been just enough to bring her back and no more, for Dillaway below said that when down she lay there some time before slowly rolling her masts out of water. I had assisted in the trials of capsizing a lifeboat, which had to right itself, and do it with outside keel and air boxes, but never for a moment dreamt I should find myself in a vessel hove down as we hove the lifeboat down; and never will I go to sea with inside ballast again, for that ballast might easily have dropped out through the deck house, and had it done so *Typhoon* would have gone to the bottom and no more would have been heard of her. She must have been within a hair's breadth of it as it was.

We made ourselves as comfortable as we could, spreading towels over the floorboards to keep the broken glass underneath and so out of our bare feet, and then opened the last tin of soup, the last tin of beef, and the last tin of mixed vegetables, which we had put by as an emergency ration; for we thought how close we had been to missing that last meal altogether, and that we might take it inside us wherever we went. We also opened a bottle of cognac and made a feast of it, after which we sang our best songs, Dillaway and myself being the choir leaders, and then to bed, with the seas crashing down at regular intervals of about half an hour. By this time we had become used to it, and there was no more to do except sleep. We could not sail, the wind and sea were too much, we could not eat as we'd eaten the last of everything, and so to bed. And sleep. 'Oh sleep it is a gentle thing beloved from pole to pole.'

And we none of us woke till it was broad daylight on Thursday 18 (next day). The wind, though still blowing, had eased, and the seas were not thundering down on to us so heavily or so often. Charles lit the coal stove; we found some porridge, which had fallen into Dillaway's bunk off the stove, and fried it for breakfast, and with a tiny drop of soup felt braced up and cheerful.

'Joy cometh in the morning,' I used to sing without realising how true it was, for how can a boy of twelve know the full meaning of words? Those who have spent a night of doubts and fears at the bedside of someone dear to them, will understand when they remember the hope the bright gleams of sunshine brought in the morning, how joyful we were and how our joy was further increased by finding the porridge in Dillaway's bunk.

By 2.00 in the afternoon the seas had eased, so that we could work about the deck again. We set the jib and mizen, and by 4.00 p.m., after relacing the head of the mainsail, we were able to set and carry it also. Our position was about 200 miles south-east of New York, with the wind north-west, dead ahead.

A tiny land bird came aboard and rested for an hour or so and then flew away again, and it made us wonder how many small birds able to fly at about 50 miles an hour must be swept off shore and lost by winds above that speed. By 5.30 p.m. the wind had died away completely, but two hours later it filled in again more westerly, allowing us to steer north. All night *Typhoon* steered herself closehauled, so that the man on watch sat in the companionway in the warmth of the coal range with only his head out in the bitter cold of the night.

Friday, November 19, came in colder than ever, with the wind more westerly, so we knew we were clear of the Gulf Stream, and with the continual showers of icy water we had to shorten up the tricks at the wheel, for the lack of food made us unable to withstand the cold. At 8.30 a.m. we were forced to put one reef in the mainsail, and at 1.00 p.m. another, and even then *Typhoon* could only just stagger along with the press of sail she had. A race not against time, but against starvation and hunger urged us on, and had been the cause of our driving on, when we should have hove to during the last two heavy gales. Our afternoon sight put us 159 miles from New York and 115 miles from Montauk Point, so we decided on Montauk and Long Island Sound.

At 3.00 p.m. a steamer steering a north-easterly course passed within a quarter of a mile of us, so being the signalman I semaphored 'Please report *Typhoon* from Azores.' She repeated the message and reported us, for the Navy stations were on the lookout for us, and they received the message. At 4.45 p.m. we were forced to lower the mainsail entirely, for it was without doubt blowing a gale again and this eased *Typhoon* in her motion. Then we cooked our meal. For some days we had been living on flour and water, which we could eat all day without satisfying our hunger. We had no grease at all, and the way we cooked the little pancakes was to put five little dabs in the pan and turn them over as they began to stick together, the art of the job being to turn them when they began to solidify and before they stuck to the frying pan. Then we ate one each while the next five were in the pan, and so our meals lasted hours without satisfying our hunger. This one took three men to cook. The skipper was lashed to the stove, with another lashing to hold him off it, Charles steadied him as well with one hand, and I mixed the batter wedged between the companionway and the oilskin-locker.

After we had taken her mainsail off *Typhoon* steered herself under jib and mizen all through the night; this was a relief to all, as the man on watch, sitting in the cabin with only his head out in the cold, was able to do four hours on, which gave good long spells below for the rest, and we needed sleep to make up for our lack of food. Or at least it seemed so, for we were none of us feeling strong. Saturday, November 20, came in finer, with the wind lessening; at 7.00 a.m. we shook out the reefs in the mainsail, and after repairing the clew set full sail once more. The wind having shifted north let us steer West by North for Montauk Point.

At 11.00 a.m. a ship going east was passing our bow within ¼ mile, and, to make sure that our position and the fact that we were still going strong should be known ashore, I semaphored, 'Please report *Typhoon* of New York thirty-one days from the Azores.' But she was a Spanish ship and could not read the message; she therefore stopped her engines and hove to while we luffed under her lee. She was the *Guillem Sorolla* of Valencia, and after asking them to report us, the skipper said that our food was low, exchanging cards politely with the captain of the steamer by a boathook, not a footman. Thereupon someone threw over one or two sea biscuits; Charles and Dillaway pounced upon them, broke them into pieces and shared them out so enthusiastically that our plight became apparent. That generous Spanish captain then proceeded to load us with food. He passed us a leg of mutton, a 30 lb. chunk of beef, sugar, ten loaves of bread, rice, a keg of lard, slabs of dried codfish, onions, cabbages, salt pork, apples, pears, tinned fruit, salmon, sardines and two bottles of cognac. The sight of all this food coming aboard was too much for us youngsters, and while the skipper kept up his protest that we had quite enough to go back to Europe with and did not need any more, we kept prancing excitedly about the deck, and as our unconcealed joy made the skipper's words unavailing, manna still rained down from heaven. All this time Charles was at our stern and I was at the bow surging our two warps, so that *Typhoon* kept fairly well behaved as she rose and fell in the steamer's lee, for we had just that much control left of our feelings, though Charles's abandon came near imperilling us on more than one occasion.

The captain was quite delighted at having saved us from hunger; when we let go our warps and fell away from the steamer, giving three cheers for her, her captain and crew, and salutes on our foghorn, her powerful steam whistle responded with a succession of deafening blasts.

Then, leaving me to trim *Typhoon* so that she would sail herself, the rest went below. *Typhoon*, knowing that I wished to follow them, sailed herself perfectly at once, and to see that crowd below was a sight worth staying behind for. There was the skipper, who had shown great control on deck, with a great 30 lb. chunk of beef on his lap, fondling, stroking and patting it, as he cut off great chunks, which we fried and ate with the new bread, and for hours we cooked and feasted, finishing up with fruit, during all of which time our vessel sailed herself. And then, wondering if it was fair to our 'Little Marys' to load them with so much food after they had been empty for so many days, we took five cascaras each and hoped for the best; the combination seemed to suit our insides, and I suppose that if a man eats even as we did, and needs it, no harm can result. Directly we had finished, the skipper set to work preparing and cooking the dinner of roast beef, with fresh vegetables, and fruit, and the toast in cognac was to the *Guillem Sorolla* and Captain Soler her skipper.

Early next morning Dillaway, who was at the wheel, sighted a flashing light on the port bow; but instead of the Montauk intervals it showed the triple flash of Shinnecock Light, thirty miles to the west of where we thought we were. With the growing light the skipper recognised the lighthouse as Shinnecock, and, as we had been given our position by the steamer that fed us, we could only conclude that the Labrador current had set us all that way down the coast. With the breeze north-easterly we decided to make a fair wind of it to New York instead of beating back to Montauk and running down the Sound, so we ran alongside the outer edge of Long Island, getting closer and closer in order to gladden our eyes with the unfamiliar sight of land, and at 1.20 we brought Fire Island Light abeam. The skipper steering took her farther and farther inshore while we cooked all sorts of weird dishes, which the skipper helped to eat, for we were a happy ship; the food and land we had longed for were now ours to enjoy, and we grew careless of the sea, until suddenly the skipper yelled 'breakers ahead,' and we found that we were over Jones Inlet Shoal. Gybing over we went out to sea again, touching only once, but hard enough to frighten us, for there was quite a sea running still.

When we had regained deep water, and were clear of the shoals, we went back on our course again, and this time in gybing the mainsail burst across from leech to luff with a report like a rifle. The mainsail had been through a lot in its passage across the Atlantic and back, and it was a cross cut sail of 10 oz. duck. It was not so much due to wind as to hard wear that the mainsail went, although it was blowing quite hard.

By 10.00 p.m. we cleared Rockaway Point and anchored for the night off the Atlantic Yacht Club in Gravesend Bay, thirty-two days from the Azores. The next day we beat up to Staten Island and moored in between two piers and then could not get out as a hard wind blew in right on us, and so we spent a night moored at all four corners pitching up and down.

Then with W. P. Stephens, his son Koke, and his confederate Henry Frisch, we started late for tide to beat up the East River, through Hell Gate into Long Island Sound with jib, trysail and mizen. All went well till we were in the lee of the great buildings, and here we were naughty again; Koke, who had so often sailed this part of the East River, wished us to do so and so, and we left it undone, for Charles and I had never before seen New York, and those lofty buildings whose outlines just showed against the sky looked like fairy palaces, so we did not pay much attention to navigation, and the skipper had so much news to hear from W.P. The natural consequence was that a four knot tide took us into a string of moored barges with a crash which splintered our rail off on the quarter, and started a swearing match between Koke and the skipper of a tug, until he recognised *Typhoon*, and then he towed us into midstream and cast us off with a cheery 'Good Luck.'

We had missed our tide through Hell Gate, which moreover was not much of a place for us after dark, so we put into the New York Yacht Club's River

Station for the night, and next day sailed through Hell Gate and anchored off Whitestone landing, in front of the skipper's house, so ending an eventful Atlantic crossing.

Typhoon had brought us through storm and sunshine; we had learnt to rely upon her and she never failed us, though we had driven her to the utmost and beyond it on two occasions. We were happy to be in America safe and sound; and we were sad also, for we should now part, five of us, who had lived as brothers, and perhaps not meet again.

Dillaway left for his home, and so did Jim. Charles and I went to the docks of New York, where we found a job for one as a trimmer on the *Celtic*. So Charles worked his way back to England shovelling coal, and I stayed on till such another job should turn up.

My sojourn in New York was far longer than I anticipated, and was also quite sad, but looking back I am glad that this was so, for it gave me a view of life that I would otherwise never have known. We were fortunate in getting Charles a job homewards right away as a trimmer on the *Celtic*, but I was not to be so lucky, for at this time there were some 2,000 seamen out of work in New York alone, and there was a great deal of difficulty about getting a job at all on a ship bound for Europe.

I had a little money in my pocket, but decided from the beginning to live as cheaply as possible, and so booked a cubicle at the Seaman's Institute down the bottom of South Street. This had two advantages for it was not only cheap, but here one was in close contact with the docks and shipping, and though the seamen from all parts of the world were in many ways a rough lot, there was a deal of kindness in amongst them all. Generally my days were spent in going round the docks trying to get a passage home and working at odd jobs, and my evenings in the reading rooms of the New York Public Library, from which I would come back to the Seaman's Home at night and turn in to my little cot in a small cubicle, generally living on one meal a day and that the cheapest I could buy. Some days when funds were low it would only consist of a plate of rice, which was five cents.

The days were really dreary as it was winter time, and I, a stranger in a strange land, found New York a very cold and inhospitable place. There were hundreds more like me trying to get over to Europe, but though the days and the fruitless search for a job to take me back to England were dreary, they were never dull, for the docks and piers, however cold and desolate, were full of interest. From them ships were sailing to all parts of the globe, carrying cargoes of all kinds and passengers and crews of all nationalities, and one mixed with men from all over the world all day long.

In a way docks and big railway stations are very much alike. They are cold, draughty, dismal and dirty, for coal dust and smoke smother both with grime, and both are so busy that there is no time to keep them clean; people and goods are arriving and departing from and to all corners of the earth, and because of all this both are full of interest and excitement all the while.

However, as the days grew into weeks the New York Docks appealed to me in one way only, and that was as the doorway to Europe and England.

One of the many jobs I had was that of third cook on the *Roman Prince.* The first and second cooks were darkies and they did the cooking, while my job seemed to consist of keeping a huge earthenware jar of water filled with peeled potatoes, and it was surprising the number of potatoes one had to peel to fill that great jar.

My duties were varied, for there were pots and pans and all sorts of stuff to wash and clean, but after a day or so I realised that though I was given the title of third cook, I was in fact the scullion of the galley. But that was no matter, for in a short while the *Roman Prince* would be bound for a Spanish port, across the Atlantic and so much nearer England.

I never enjoyed the food or was able to eat much of it aboard this vessel; it was not so much that when one opened a drawer of sugar it was alive with huge cockroaches running about, as that the smell and steam from the cooking seemed to feed and nourish one, and since then I have found others such as chefs at hotels who very seldom eat a meal.

Working as deck hands aboard were two Spaniards, who had stowed away in order to reach America, but who having seen New York in the winter, decided that sunny Spain was good enough for them and so were returning. A day came, however, when both were taken away to hospital, and wishing to work my way back on deck instead of in the galley I saw the Skipper and asked if I could not take the place of one of the Spaniards, being conceited enough to think that as he and I were Britishers, he would only be too pleased to grant me this request. But instead he was angry, and so I lost my job as third cook on the *Roman Prince* and once more slept in the Seaman's Institute. Once more

I was back amongst the seamen of New York without a job, and before I went to sleep that night I decided to have a go at stowaway, for if two Spaniards could get to America that way, I could also get to England, and so I planned to stow away on one of the big liners bound for England. I went over her and carefully chose the lifeboat I was going to spend two or three days in; but unfortunately for me a number of others had settled on the same ship, and that evening after three or four had been discovered, a search was made, and stowaways were being chased up and down the different alley-ways on her, all of which I discovered when I arrived, with a small amount of food stowed in various pockets. From then on the ship was carefully guarded against stowaways, and after yarning to one of the men, I decided that it was the wrong way to return home, and so back once more to the Seaman's Home for the night.

Because we in the Seaman's Home were such a mixed and rough lot it was usual for almost everybody to put what little money they had into the safe on the ground floor for the night. One night I was lucky, for I came in after this bank had been locked and closed for the night, so the chap said 'Well, I will put your money into this envelope and you must remember about it in the morning.' And off to my little cubicle I went.

Early next morning, long before it was light, I came down to start my day of job hunting and had just arrived downstairs when in walked a couple of men with a gun in each hand. The first chap they met, a very kindly Irishman, who gave boxing lessons and encouraged boxing in the home, they shot through the heart, and told the rest to stand steady while they robbed the safe.

There were not many of us in the room, and we were all too far away to get at either of the men before we would be shot, so there was nothing to do but watch one of them climb over the tall grill, such as one sees in post offices, and take the money out. These two knew their way around, for they had timed their visit exactly right. First of all the safe had only just been opened, and so contained all the money deposited in it the night before; secondly, there were hardly any men about, as the opening of the safe marked the beginning of life in the Seaman's Home in the morning.

So sweeping away everything that was not money, the man who had jumped the grill hurriedly put all the money in his pocket, and out the two went.

The Irishman had been shot clean through the heart and had not bled at all, so after the police had come we picked him up and made him as comfortable as we could on a billiard table.

These two men had killed another for less than £100, and for this would have the arm of the law stretching after them for the rest of their lives, a point which shows the low state of life in New York at this time amongst the poorer classes.

Later on, when there was time we gathered round the safe to see if anything had been left, and there, swept as useless on to the floor, was the envelope containing my small amount of money.

I remember helping to load up the *Canopic* carrying half a sheep on my shoulder as one of the gang of stevedores, but finally she was loaded and that job ended; and so the days went on and the chances of getting a ship back seemed to grow dimmer.

Because I was only 22 years of age, and looked young and innocent, the man in charge of loading ships almost always picked upon me as a safe one to bully. I realised that his job was to get the ship loaded as fast as possible, for we were paid by the hour, and that in order to keep up a steady rate of work he felt he had to bully the gang under him continuously, and that his easiest and best way of doing this was to pick on the most inoffensive and swear at him all day long, so I did not take any more notice of this man than I did of the cold weather and rain of New York; all three were unpleasant and beastly, but had to be endured, therefore it was a waste of time trying to do anything about stopping them. I reasoned that as I was getting paid exactly the same as the rest of the gang, I should only do the same amount of work, and so kept my place in the line with whatever I was carrying, going no faster or slower than the rest. One day I could stand this no longer, and 'sailed in' at the big Dutchman in charge. We were down in the lower hold of the ship, and everybody was highly delighted at this diversion in the daily round, and formed a ring around the Dutchman and myself. The fight did not last very long, for I had done a great deal of boxing in my young life, and was more active and strong then I ever have been before or since. Dodging one of his wild blows I let him have a left on the chin, which not only had all my own strength behind it and was well timed, but also had the enormous weight of the man himself falling on it. Few are the moments in one's life which can compare to the exaltation felt from a perfectly timed blow on the jaw of someone you hate, and knowing in that instant that he will crumple up like a pack of cards. It is something like the feeling in cricket as the ball sails off the bat, and you know full well that it is going to be a six clean over the trees at the far end of the ground. But though I felt exultant I was still filled with a fierce anger, and jumped upon the now unconscious man and started to bang his head up and down on the steel floor. Two big darkies came and dragged me off: the rest carried the bully up out of the hold on shore, while I was paid off immediately, and I well remember one of the darkies who dragged me off saying that 'though I looked so innocent he would rather fight with "de debil," than with me'; he was so serious and solemn where I had always known him before full of fun, I steadied and sobered up immediately.

After this there was little chance of work in the docks and so my meals grew less and less; for the first time in my life I realised why men stole, for it was dreadful walking up through the streets of New York for my evening's reading at the library and seeing all the good things in the shops, with only a plate of rice inside one.

Days and days went on like this, and one night I was on a small swing bridge at Brooklyn and contemplated jumping into the dirty water below. I was feeling very despondent and gloomy and thought if I lived to be 70 I should have to work for all that time. I was quietly thinking everything over before jumping in, and picturing what I would look like in seven days when once more I floated on the surface, when the keeper on the bridge came along to me and said 'Here you are sonny, here is a cap,' as he thought I had lost my hat and was looking for it in the water below. I thanked him very much but told him that I never wore a hat and was only just watching the water under the bridge, but his kindness saved me jumping, and I have often thought of him and felt grateful, for this gave me new hope. And though I was hungry and tired I walked away up through New York to where 42nd Street cuts across it, and there with practically the last money I had in the world bought a copy of Punch, for Punch there, in those days, instead of costing 6d., cost 1/6d., a huge sum to me then; but Punch was so full of humour and fun that I understood, that I laughed and laughed; it did me more good than any meal could have done for its humour gave me a sense of balance, and the very next day I was fortunate enough to get a job on deck aboard the *Vauban*, a Lampert and Holt steamer bound for Liverpool.

The food was good and the crew were all good chaps and I was very happy to be aboard her.

I cannot now remember which watch I was in, but I have a vivid picture of going down the gangway, turning to the right and walking across the athwartship alley-way into our foc'sle; half way across this alley-way there was a little window and the hold the other side of that window had a cargo of apples in huge casks. One night another chap and I thought it would be good fun to supply our watch with good apples, so we took the window out, climbed in through and broke open one of these casks of apples. While in there we talked in whispers, pitching away with an axe merrily at a cask. Half way through the job I burst out laughing and could not stop, while my companion in crime, quite horrified, tried to stop me. He could not see the joke until I explained to him that it suddenly struck me as being very funny that we two should be talking in whispers all the while we were hacking out at a cask with an axe, all of which made far more noise than we would make talking in ordinary voices. He was not a bit amused, so we settled down to the job of opening the cask again.

A small enamel basin would just go through this window, so we kept filling this up while our mates took it out and into the foc'sle, till finally the whole cask of apples was stored under the various chaps' pillows. Then came the problem of getting rid of the cask, for when the time came to unload her, the broken cask would show that the cargo had been broached. I have an idea one could get three years for broaching a cargo, so this was broken up into smaller pieces and passed through the window and dropped overboard by other members of the crew.

All this was not as easy as it sounds, for there were various alarms through the job, and often the piece of glass put back into the window, and half an hour would go by before we could pass any more apples or bits of the cask through.

Through the 24 hours there were all sorts of jobs, scrubbing down deck, scrubbing the paint work round the outside with 'suje mooje', boat drill and look outs, but the job I enjoyed most of all was being a look out in the crow's nest, on top of the fore mast at night time, for here one could watch and think, and so much did I enjoy this, that many a night I spent a four hour watch up there, though we were supposed to spend two hours on the bridge and two hours in the crow's nest.

The chap on the bridge had a cup of cocoa, for it was winter time and cold, and for this luxury I would often arrange with the mates in my watch so that I remained in the crow's nest the whole four hours.

Driving along before a heavy gale we were scrubbing and scouring the outside paint work on one of the lower decks, in spite of the fact that these decks were continuously being washed by seas rolling up astern, and here were we outside the guard rails, (for we stood on top of the rails of one deck to scrub the lower paint work on the deck above), in great danger of being washed away with every sea that rolled up. However, just then the bo'sun's mate came along and the biggest sea of the morning came rolling aboard and washed that deck clean, while the two of us scrambled up outside on to the deck above, coming down again when the sea had gone, which finished that job for the day.

However, we finally arrived in Liverpool after a stormy passage, breaking a great many wire warps as we hauled in to our berth, for a hard gale was blowing.

I was in England once more.

A crowd of us went ashore for supper, feeding in a place where all orders were called up and down a lift to 'Annie', and soon I was home on the Isle of Wight, with my feet under my own father's table feeling that I did not want to wander any more.

I had been most stupid in New York, through personal pride, for I felt that a man of twenty-two should be able to stand on his own feet and not ask for help from anyone.

I had a great many friends in America, all of whom had tried to find me, but I took good care that they did not do so. I could have cabled home to my father for any money I needed, but my stupid pride prevented all this, and now whenever I hear the hymn 'Lead, kindly light' with its words 'Pride ruled my will' a lump comes into my throat, for those damp dismal days in New York come back and with them the realisation that through foolish pride I nearly left this earth.

The lessons *Typhoon* taught me were many, as she first took me into deep waters.

(1) That a small vessel going to windward could stand far more than her crew, but that chasing away before a gale the crew could drive her beyond her limitations.

(2) That one man could reef or stow a 500 sq. ft. mainsail in all weathers, but not a larger sail.

(3) That as small vessels can and do capsize, inside ballast is a source of danger, and if carried should be fastened down.

Our National Lifeboat Institution, knowing that boats capsize, have designed self-righting lifeboats which are thoroughly tested for their self-righting powers before being handed over. *Sea Queen* capsized off Japan, *Joan* off Greenland, *Typhoon* between Bermuda and New York, and other cases are known; these three righted themselves as lifeboats do, and most small vessels would with outside ballast, whereas the tendency of one with inside ballast is to stay there, for this ballast drops on the deck, and holds her down, while of course if it dropped through she would sink.

(4) That an engine in a sailing boat is unnecessary, and if carried should be in a separate compartment that is watertight, fireproof, sound proof, and smell proof. Whenever *Typhoon's* engine ran it turned her

from a clean, lovable and happy ship into a dirty, smelly and irritating vessel.

(5) That a ketch will not handle under jib and mizen when there is a wind and sea enough for her to shorten down to that, as she will not stay.

(6) That 10 oz. duck is not heavy enough for an ocean cruiser's only suit of sails, and that the cloths should run parallel to the leech, with a leech rope fitted the whole length of the leech. This enables the reef points to be put in seams, where they are much stronger.

(7) That the old sailing ship reckoning of 100 miles a day was right for provisioning, but allowances should be made for calms, gales, or spars and sails carrying away, all of which delay a vessel. *Typhoon* sailed roughly 5,000 miles in 50 days.

(8) A crew should be divided much as we were, the owner navigator, Jim engineer, Charles in charge of galley and food, and myself in charge of sails and spars.

(9) That it is asking for trouble to cross the Atlantic during the equinoctial gales in a small vessel.

(10) That although *Typhoon* weathered two gales that distressed large steamers, her broad stern and fine hollow water lines were not ideal.

(11) That all outside ballast, by giving extra stability and power to carry sail, helps a vessel to tack against a steep heavy sea. (With all her ballast on her keel, instead of only half, *Typhoon* would probably have come about in that gale off the Azores.)

(12) That the hardest and saddest part of an ocean cruise comes when the crew say 'good-bye' at the end.

2. *DIABLESSE*

The schooners that fish on the Grand Banks of Newfoundland are fast and manly vessels. Developed as they are to withstand the winter gales of the Atlantic, they yet had to make fast passages home from the fishing grounds under sail. Diablesse *was modelled on the Gloster schooner lines, and being 46 ft. on the waterline with 15 ft. 6 in. beam, and having her 1,800 sq. ft. of sail divided into schooner rig, was an ideal craft for making long passages.*

In the summer of 1921 *Diablesse*, with her owner, his wife and two others, sailed across to Cowes from New York, and when in 1922 the owner offered me the job of forming one of his crew for the voyage back I gladly accepted. We sailed at 4.00 p.m. on June 17 from Cowes, the owner as skipper, his wife as mate, Bobby Somerset navigator, myself in charge of sails, and Bill Waight in charge of food. Everyone had thus a particular function and responsibility, but of course we all helped each other whenever we could, and such an arrangement made a happy ship.

Tern III, with her owner Claud Worth aboard, was under way as we left, to accompany us to the Needles, and as both vessels were very much the same length this part of our cruise turned into a race. Once we had the fisherman's staysail set *Diablesse* drew away from *Tern III*, for with the wind north-westerly it was a reach down the Solent, when our schooner rig was at its best. By 6.46 p.m. we were off Old Harry, and *Tern III* was shaping in for Poole, having lost ground all the while. Had this part of our course been to windward there would in all probability have been a different story to tell, for then *Tern's* cutter rig would have given her the advantage.

And so we started for Madeira happy in the knowledge that at least reaching we were faster than *Tern III.* At 8.30 p.m. we took in the mainsail and set the trysail, for the wind was freshening. It was our first night at sea, and except for the owner and his wife we were strange to *Diablesse*; throughout the first night, therefore, *Diablesse* sailed under jib, staysail, foresail and main trysail. Next morning (June 18) after breakfast we put full sail on her again, and at noon our log read 89 miles, giving an average of 5¼ knots since it had been streamed at 7.00 p.m. near Old Harry.

At 4.00 p.m. on June 19 our position was 10 miles north-east by north of Ushant, thirty-six hours from Cowes; since noon the day before we had averaged just over 7 knots, and the wind having hauled ahead, although making us sheet down hard, enabled us to clear Ushant nicely. So we continued our way to Madeira with one on watch for three hours, giving the rest nine hours off; life on board was easy, for *Diablesse*, being twenty-one years old, had settled down and did not need the constant attention to chafe and small gear that new boats demand. After fourteen days of quiet and peaceful sailing we arrived at Madeira, anchoring in Funchal at 9.00 a.m. on July 1, with the log reading 1,382 miles from Old Harry.

Here we spent four pleasant days. The intake pipe on our engine had broken and let water into *Diablesse*; we loaded her bow down with huge stones off the beach, with the object of lifting her stern high enough to get at the pipe, but it was in vain, and the picture of that heap of stones will always remain in my memory as representing the amount of water a sailing ship could take on her deck without seriously affecting her. We then had recourse to a diver, and it was arranged that I should swim underwater to show him the hole and pipe, as there were two; twice in the course of this operation he almost drowned me, for in the midst of my explanations I would need breath, whereas he, having plenty pumped down to him, did not realise this and held on to me.

At 7.00 p.m. on July 6 we sailed, with several friends on board. Coehela, who had been most kind to us, steered *Diablesse* out into the night. The full moon made a silvery pathway across the ocean; the reef points pattering on the sail, as *Diablesse*, with her sheets off, rolled quietly along, made a sound like gentle rain, which is one of the pleasantest sounds, for it conjures up a picture of fine weather and a fore-and-aft vessel gently flapping her sails as she lifts her way over the easy seas. Our Funchal friends came further than they intended, for on such a night they could not bring themselves to go back aboard their steam tug; but finally they left us, and we sailed on in the moonlight.

We headed south into the Trades, where *Diablesse* rolled her way along steadily and easily under square-sail and mainsail, with jib set also in case we needed it in a hurry. And in those weeks of pleasant weather *Diablesse* endeared herself to us, for she moved with the graceful ease of a porpoise, lifting to the seas without any effort, so that life aboard was perfection.

We were a little kingdom of our own. The skipper, aged thirty-four, was the father of the family; Bobby and I the elder twins, twenty-four each; and Bill and Miss Ann (as we called the skipper's wife) the younger twins, both being only twenty-one. Day after day passed peacefully by; Bobby reading for an hour every evening out loud to us all in the cockpit, Miss Ann mixing Mint Juleps about 2.00 p.m. every afternoon, a Virginian drink, which first of all produces smiles, then a great feeling of energy, then a powerful desire for sleep, while, as my trick at the wheel generally started soon after sundown, I used to sing for half an hour with Bill as a helpmate, and Bobby would lead us in 'Green grow the Rushes, O', which always started off with three verses or so for Bobby to tune up in, and away we'd go with a swing. And so time passed, and we bent south until the sun was plumb overhead, reading 90 degrees on the sextant all round the compass at noon; and after that we bent our way north again for Bermuda, all of which time the squaresail lifted *Diablesse* over the seas, while the mainsail prevented her from rolling.

As we worked our way north we had to cross the Sargasso Sea, the dead spot in the North Atlantic, where there are no currents and usually no wind. Here we felt the heat of the sun, for whereas farther south, directly under it, we had had the fresh Trade winds to cool us, here there were no refreshing breezes, and we were glad when after several days we picked up enough wind to take us away from the deathly stillness of the Sargasso. The weed was not very thick there, but the place was alive with fish, all quite tame and anxious to take a bent pin without any bait on it, but their mouths were generally too tender and we seldom landed any. It was a relief when first of all fitful squalls and then a steady breeze let us continue on our way.

After twenty-eight days we came to Bermuda, and the whaleboat that brought out the pilot was very pleasing to the eye; long and narrow, with her sweet and easy lines, she brought back memories to Bill and myself of Cowes Sea Scouts, for I was Scoutmaster, and Bill Assistant Scoutmaster, and in *Valhalla's* whaleboat, very like this Bermudian pilot-boat in shape, we had sailed thousands of miles.

The wind being fresh, we beat in through the coral reefs with the foresail and the main topsail stowed, and *Diablesse* tramped along under jib, staysail and mainsail. At 3.30 p.m. on August 4 we anchored in Hamilton Harbour, there to remain for a week. Our stay was not marred by any noise, for the Bermudians in their wisdom do not allow trains, motor cars or any such things to spoil the beauty and peace of their islands; there, alone in the world, is an island upon which quiet can be enjoyed.

On August 10, our sailing day, we watched their 14-footers racing. With a 35 ft. mast and a 16 ft. bowsprit they set 350 feet of sail, and the crew of six was hardly enough to sit out this amount of canvas. It was a most interesting race to watch. The dinghies were moored either side of the committee boat, which, as there was no stream, lay head to wind. At the starting gun the dinghies sprang off on either tack; then when they met after coming about, instead of the port tack boat giving way they both went about, the idea being that as the two had done equally well to meet after sailing a certain time neither should have any right of way. There is much to be said for this rule, for there is no doubt that our port rule gives the starboard tack boat a great advantage, equal to about three boats' lengths in practice, and such rules make racing a game of tactics like chess rather than one of pure sailing skill.

After the race we set sail and left at 5.00 p.m., foolishly starting the engine for the passage through the reefs to please the pilot by making things easier. This set fire to some oakum resting on the exhaust pipe which soon became red hot, and a serious fire started back in the counter. We none of us thought of going back and when we had cleared the reefs I rowed the pilot ashore in the dinghy, listening to the warnings and bearings he gave me by which to clear the reefs; and as there were sharks about I had no desire to scratch the dinghy on the reefs or capsize in the seas that broke over them, for it was now dark. Having put the pilot ashore I rowed back as fast as I could towards *Diablesse*, who all this time was proceeding to sea, her crew having too much to attend to with the fire, which had increased greatly since my departing, to think that every mile she sailed away from Bermuda was another for me to row, in a sea that was breaking not heavily, but enough for me, whose mind still dwelt on the sharks the pilot had spoken of so eloquently.

So, rowing as hard as I could without shipping too much spray, I chased after *Diablesse*, and for a long time made no impression. It seemed as if I could never catch her unless a calm came, but imperceptibly the distance between us lessened, and at last, in a state of exhaustion, I was alongside, with only the skipper to help hoist the dinghy because of the fire. We could have done with another on the dinghy job, for with the sea running and the dinghy going up and down, hoisting in was difficult for two. All thoughts of a rest after the hard row were quickly dispelled, however, by the hold the fire had; and as the only way to the counter was from below, and no one could breathe there for smoke and fumes, we started bashing in the cockpit floor with the anchor as a battering ram. It was a job that delighted me, for I was angry first of all at *Diablesse* jilling out to sea almost as fast as I could row, and then with myself for being angry when I discovered why, and then because I had felt rather afraid of those sharks; though there is no doubt that rowing a dinghy in a sloppy sea on a dark night rather lends a man's imagination a hand. It will therefore be understood that I put my heart and soul into the bashing in of the cockpit floor; and then Bobby and Bill set to work, the one aiming the stream of water aft on to the flames while the other pumped with the powerful boat pump. Soon the fire was out and we all turned in except the skipper, who took the first trick at the wheel.

We were now at sea with a self bailing cockpit that would bail itself into the ship, and so next day as ship's carpenter I set to work on the broken floor; and twelve years later the repair still held, as watertight as when it was completed, and the mystic words 'Pol Roget Champagne' could still be read faintly under the mahogany paint on the locker.

It may seem strange that none of us thought of turning back when the fire was at its height, for there can be no doubt that fire at sea is dangerous and often fatal; but we all had such confidence in our ship and ourselves that we sailed on, Miss Ann steering and Bobby pausing just long enough to take a departure from St. David's Light.

The weather continued moderate, then light until the night of August 18, when it breezed up, and with all four lowers *Diablesse* smoked along, steering herself with her lee deck awash. During this night, which was one of rain, wind, lightning and bad visibility, we were due to sight Montauk Point. Bobby, who had navigated throughout, picking up Ushant, Madeira and Bermuda with great exactness, was just a shade anxious, for this would be our landfall; and besides the feelings all navigators have when making their landfall, there was the fact that when we burst the cockpit floor in we had destroyed the compass-correcting magnet, so that as well as the worry of the chronometer rate, there was that of the compass error. The log was carefully read from time to time by an anxious navigator; in two hours it gave 22 miles, which at that time I quite believed, for during the whole of my watch I stood in the fore shrouds to leeward with the seas breaking aboard and running past waist high, vainly looking for a lighthouse flashing ashore, and would have believed she had done 12 knots quite easily that night. But twelve years later, during which time I'd never seen 11 knots logged on a boat under 60 feet waterline, I came to the conclusion that *Diablesse's* log must have been read early and then late to give 11; I should put her maximum speed at 10 knots.

Be that as it may, all through the night *Diablesse* roared along; no light appeared, but though the visibility was bad the brilliant flashes of lightning would have been enough to show us land ahead before we were in any danger of striking. On we sailed, therefore, and dawn revealed Long Island and Shinnecock two miles away, the latter's light having failed to pierce the driving rain during the night. A course had been laid for Montauk Point, as in the case of *Typhoon*, and here again we were thirty miles out in our reckoning. Bearing in mind that a steamer had given *Typhoon* her position the day before, and that Bobby had proved himself the most exact of navigators, I am convinced that the Labrador current running south inside the Gulf Stream sometimes sets a small boat much farther south than is generally supposed. We sailed on into Long Island Sound, the weather clearing as the day grew older; but inside we picked up a very heavy squall, such as is often met in the Sound. Black heavy clouds made up, and then came rain and wind so hard that the water was flattened out and the bowsprit could hardly be seen, and *Diablesse*, lying down with her lee deck under to the coach roof, flew along through a hissing sea. Bobby stood by the main and Bill by the foresail halyards, but if we had started anything in that wind the chances were that the sails would go, so the owner in the hatchway said 'Hold till I say the word', or rather shouted it, and *Diablesse* staggered through the squall with her four lowers. Afterwards we were told it blew 60 miles an hour. Then it passed and we sailed peacefully into New London, where we anchored for the night, without going ashore or anyone there knowing we had just arrived from Cowes. Next morning, August 20, we started for City Island and sailed the 83 miles from New London in 10 hours, a passage which shows that *Diablesse* bustles along when she has her wind.

So ended a very very pleasant Atlantic crossing. We had fine weather throughout, for *Diablesse's* mainsail was not reefed once, and the only time we had taken it in and set the trysail was the first night out from

Cowes, when the skipper, knowing he had a crew aboard who were new to the ship, and considering that we were not racing, rightly thought a peaceful night was the thing. And it was. We had taken 51 sailing days to sail the 5,000 odd miles from Cowes to New York, which gives the same average as *Typhoon's*, and shows that, as a general rule, in provisioning and preparing for a cruise a man should reckon 100 miles to the 24-hour day, allowing of course food for eventualities that might cause exceptional delay, such as gales, calms, and broken spars.

For two months *Diablesse* loafed about Long Island Sound, and then, with a smart breeze at midnight on October 17, she put to sea from City Island, bound to Gloucester.

Only the owner and myself were left of her Atlantic crew, for Bobby and Bill, after staying to see the 6-metre races between the American and British teams, had departed to England, and the owner's wife, Miss Ann, was in Virginia with her parents. By noon next day we were off Block Island. There was now much more weight in the wind, for it was no longer summer, so we handed the squaresail, which eased *Diablesse* considerably, though she was still hard to steer under her four lowers.

At 2.30 p.m. the jib split right across. I took it in and bent the old one on to the hanks without setting it. Then just after dark *Diablesse* gybed, and carried away her main gaff, which meant that the mainsail had to be stowed, for it looked just like the broken wing of a bird. This was a difficult job, for the broken gaff, flogging about, seemed intent on doing damage, but at last both sail and gaff were stowed. Then we took in the staysail and hove to for the night, under foresail only.

Next morning (Thursday), at 6.00 a.m., we put the staysail on her, and setting the main trysail, continued on our way. Later in the day, the wind having eased, we were able to set and carry the squaresail as well. Throughout the night the owner and I had taken watch and watch, for though *Diablesse* was safe enough with her head under her wing, we were close to the shoals to leeward, and there was also the chance of a steamer coming along, whose lookouts, on such a dirty night, might not become aware of our existence until she hit us.

I repaired the gaff by chopping and splitting down some wood into splints, nailing them along the broken spar and binding the whole with wire seizings, which were tightened by wedges driven in afterwards. Although the job was not very neat the gaff was as strong as ever, and the mainsail was rebent to it, but left stowed until the weather should moderate. Towards evening the squaresail had to come in, as the wind was increasing again; and then, as darkness settled down, we entered the Musketer Channel, and under staysail, foresail and main trysail, *Diablesse*, with seas breaking over her, threaded her way through the channels inside the Nantucket shoals. The night was dark, but fairly clear, and Kelley yelled the different compass courses from the cabin. When he was not engaged in studying the chart, he was in the lee rigging, looking for lights and buoys, while I handled *Diablesse* alone, for even in this weight of wind, she steered easily under her present rig. Thus we passed the Cross Rip Lightship, and went on through to Cape Cod. For me, steering *Diablesse*, the time went very fast; when we had cleared the worst of the shoals Kelley asked me to guess the time, and I said '10.00 p.m.,' when it was in fact 3.00 a.m. The two of us were so happy with *Diablesse* and this wild night that we almost fought for the wheel; although I had been steering some ten hours I still wanted to continue, for the roaring wind, the darkness and the flying spray, made the night so exhilarating that we both wanted the excuse of steering to stay up. In the end we both spent the rest of the darkness on deck; but dawn found us tired, and the wind ahead was driving *Diablesse* off Cape Cod, and the steep breaking seas were coming aboard hard and often. Soon we came upon a big Gloucester schooner hove to, and decided to follow her example. Taking in the trysail and then the staysail, we put the helm a-lee, and starting the fore sheet, turned in; for it was daylight, and we were headed off shore to safety; and so we spent the day sleeping contentedly.

At sunset the wind eased, so we made sail, setting the staysail and trysail, and sheeting in the foresail. We tacked and stood in for Cape Cod, the skipper taking the first half, and I the second half of the night. By dawn (Saturday) the wind had eased still more. The trysail was taken in, and the mainsail set, and then later the main topsail and jib, and *Diablesse* was again under full sail. But the wind fell away rapidly, and it was dark by the time we were within two miles of Cape Cod.

So far only two people have appeared in this part of the story, and those two, the skipper and myself, worked *Diablesse* to Cape Cod without any bother or fuss. But below we had two men who kept their yacht off Larchmont; soon after we left City Island they had ceased to take interest in sailing *Diablesse*, for although we had had so much wind and work they had not appeared on deck, and now they found that they had urgent business in New York, and so wished to be put on shore as soon as possible. The dinghy was launched and I rowed them ashore, where we landed safely in spite of the heavy surf over the flat sand. Here, as almost everywhere, the size of the waves varied, and three large waves were followed by about six smaller ones; by keeping just clear of the line of breakers till the last of the big waves rolled up, and then driving in on top of it, we got safe ashore, the two men jumping out and running the dinghy high and dry before the next large wave came in. Then, when getting off again, I launched on the last of the large waves, and rowing fast, was clear of the line of breakers before another heavy one came roaring in.

I rowed on out to sea, and when two miles off, looked about for *Diablesse*, but could see no sign of her in the darkness, for she had sailed closer in to the shore. But when I flashed an electric torch all round, she saw it, came out towards me, and soon I was on board and the dinghy in on deck. It was only two hours since I had left, but it seemed much longer; it had been a weird experience landing in the surf, as there was a heavy mist, and this, added to the roar of the breakers, somehow made the minutes seem like hours. The lighted cabin and saloon looked cosy indeed, and as we sat down to the evening meal, which the skipper had cooked meanwhile, *Diablesse* seemed very warm and affectionate.

At 9.00 p.m. the skipper ordered me to bed for five hours, while he stood the first watch, and then at 2.00 p.m. I took over and he turned in till 7.00 a.m., so that we both had five hours of solid sleep. There was little to disturb us except that twice, in the mist which came up with the light wind, we were almost run down by steamers; but they sheered off in time. The next day (Sunday) was a day of light winds and autumn sunshine, with a mist that cut down visibility to 2 miles, and in the warm sun we sailed quietly towards Gloucester, eventually dropping our anchor in the inner harbour alongside the schooners *Hookah* and *Lloyd W. Berry*.

That night we all went ashore to a roaring dinner; there were Smith, the owner of *Hookah*, Herb Stone the editor of *Yachting*, Bill Nutting the editor of *Motor Boat*, Chris Ratsey (from Cowes), Sid Breeze the owner of *Filatonga*, a couple of Ford brothers, who were cruising late, Captain Wallace the square rigged man, who has written so well of his ships, Roger Griswold, the owner of the *Lloyd W. Berry*, Jack Kelley, owner and skipper of *Diablesse*, and myself; with such a wild gang, all bursting with energy and vitality, the dinner could hardly be expected to be anything but a roaring one from the start. But before we fed, we visited Howard Blackburn, who after his fingers had been frozen off, had twice sailed across to Europe, in the *Great Western* and *Great Republic*, single handed, without fingers or thumbs, the most remarkable of all small boat voyages; and, though he could not feed with us, he wished us a merry evening.

We were in Gloucester, a town I had always wished to see, for the Gloucester schooners, which sail out and fish on the Grand Banks of Newfoundland, are the finest sailing vessels in the world. Designed and built for speed, they have to be seaworthy as well, for their work takes them on the banks where the seas break heavily in a gale. As luck would have it, it was the time of the International Fishing Schooner Races, which accounted for the presence of the crowd with whom we dined, and on the morrow the *Henry Ford* of America was to race the Canadian *Bluenose* for the championship of the North Atlantic.

The first race was held in light winds and the *Henry Ford* won by two minutes. Then came two days of bright sunshine with smart breezes, when the *Bluenose* won by seven minutes on both occasions. We watched the first race from the destroyer *Paulding* and the second two from the *Isherwood*, and from these two vessels we could tell at any moment not only the wind's speed, but, by steaming abeam of them and adjusting our speed to theirs, the speed of the schooners also. The last day's race was the most interesting of the three. On the reach in the first round the *Bluenose* walked along at 13½ knots with the wind then blowing at 25 miles an hour. On the same reach in the second round, although the wind had increased to 35 miles an hour, and she still carried everything, jib topsail, jib, staysail, foresail, fore topsail, fisherman's staysail, mainsail and main topsail, she went no faster. Halfway along this second reach the *Henry Ford* carried away her fore topmast, and so lost her jib topsail and fore topsail; but she did not slow up at all through losing these sails, and soon after the *Bluenose* took in her jib topsail and fore topsail, and she too, continued at her maximum speed of 13½ knots.

We laid *Diablesse* up at Gloucester and so ended the cruise. She too taught me many lessons.

That an Atlantic crossing in the summer months, in such a good little ship, and with such a happy and contented crew, is the pleasantest thing that could happen to any mortal.

That the schooner rig is better than the ketch, for though both mainsails are the same size and that of the ketch easier to handle, because it is amidships, the schooner scores in really bad weather, when with main trysail, foresail and staysail set she has her largest sail amidships, and becomes in effect a ketch for the time being. While if the wind and sea increase and she has to heave to, the trysail and staysail are taken in, and the foresheet started, when she will lay quietly until the time comes to make sail again. Added to this is the fact that, because of the position of the masts, they can be stayed together, and so strengthen each other, whereas on a ketch this cannot be.

As I had worked my way home from America after the trip in *Typhoon*, I felt that it was more manly to work a passage across the Atlantic than to be a passenger. I decided to do so again, but this time, if possible, as a trimmer.

There was no difficulty about this at all, for whereas two years earlier there had been a great many unemployed seamen in New York, now there were not so many. I was fortunate enough in getting a job as a trimmer on board the S.S. *Lapland*, and I still treasure my Discharge and National Health Insurance Card, for that voyage represents hard work and interesting experiences to me.

I see from this card (for seamen on foreign going ships) that my wages were paid from the 9th to the 18th December 1922, and the three Health Insurance

Stamps on there mark a ten day voyage filled with interest the whole time.

It is said that trimmers are the scum of the earth, and certainly one needs to be pretty strong to get on with that job, and as well as this, not to be fussy about personal comfort, either on or off duty.

We had German coal for the trip back to England and compared to British coal it is rubbish, because it clinkered up so much we had to draw one fire every watch.

A trimmer's job amounts to this, he is the handmaiden of the stoker. The stoker's duty is to stoke and clean and draw his fires to ensure a full head of steam for the engine, the trimmer brings the coal up to the stoker so that he may put it on the fire, and wheels away the red hot clinkers and ashes which are raked out.

In the first part of the voyage I had to wheel coal from a bunker some way from the hold. This hold was filled with coal, and as it is far easier to shovel coal off a smooth iron floor, we trimmers continually dug away at the face of what seemed a big cliff of coal, and because we only took from the bottom there were continuous avalanches of coal from above, as when the face of the cliff had a certain steepness, an avalanche started. Towards the end of my second watch I had just filled my barrow and was about to wheel it into the stokehold (for we trimmers had an understanding with each other that we would never go off watch without leaving a plentiful supply for the man who came on, so that he could take it fairly easy for the first part of his watch while he woke and warmed up to his work) when a heavy sea struck the *Lapland* and started a wonderful unexpected avalanche of coal, which completely buried the whole barrow and covered me in almost shoulder high, though of course I had started backwards immediately the avalanche began.

It was unexpected because the face of the cliff of coal had not reached the steepness at which an avalanche usually started, and it was not until half way through the next watch that the trimmer had cut in as far as my barrow, so this ended my carrying coals for that watch. But though the wheeling of coal from this hold into the stokehold was hard work, it was pleasant compared to the job of wheeling away the drawn fire every watch; for this huge furnace would be raked out on to the stokehold floor, but though water had been thrown on it, the clinkers remained red hot and these in turn made the barrow hot, and added to this heat was the fact that the luckless trimmer had to wheel this away bent almost double as he went up through the passage way between the boilers, where red-hot water was continually dropping on his neck and speeding him on his way; but though all these jobs were hard and uncomfortable work, because it was so exacting the four hour watch soon passed away.

One of the stokers of my watch, a big Belgian, had a rupture, and could not stoke his top fires, so as well as being handmaiden to the stoker I also became stoker myself for the two top furnaces, and pretty soon had the knack of stoking these fires. There is a great deal of pleasure indeed in throwing coal exactly where you wish to in the top furnace of a ship like the *Lapland*; people get pleasure from the swing of their golf clubs and the timing of it to a nicety, but this cannot compare at all to the art of pitching coal just into the exact spot you wish, on such a furnace. So although at the end of each watch I was tired physically I quite enjoyed the fierceness of the fight which the stokers, the other trimmers and I waged to keep the *Lapland's* steam high enough for the engine-room requirements.

One part of every watch which always amused me was when the Junior Engineer came in to oil our wheelbarrows, and I used to pull his leg and say that we could never get on without him, as we did not understand machinery enough to be allowed to oil our wheelbarrows, and away he would go with his nose in the air.

Coming off watch we had to scrub ourselves down to get rid of the coal ashes and dirt upon us, and to do this we drew a bucket of water, then taking the end of a steam hose we put the hose into the bucket and played steam into the water until it was hot enough for us; we all felt we had earned this amount of steam by our labours in the bunkers and stoke holds, and it is surprising how well one can bath with buckets of hot water in a place such as we had, where it did not matter how much water was flung and sloshed about.

After our bath we would away to our food and the foc'sle where I spent my time reading Shakespeare. Once I had hardly started to read before a huge wooden sabot was flying across at me—it missed—so I took no notice, and pretended to go on quietly with my reading; in less than half a minute the other had come across, and this time I had seen the man who threw it, so I picked them both up, and in a very innocent voice asked if any one owned them. Up stood the great Belgian to claim them, but before he expected it the first one was flying back towards him and as he dodged this, I flung the second and got him fair in the head, which laid him out for ten minutes or more; from that time on I was never interfered with and this big Belgian and I became great friends.

One by one the different chaps in our watch came over at different times to look at my book and yarn. Almost all of them wondered if it was the Bible I was reading, and I soon discovered that the Bible was the only book that they had ever read or had read to them. We all agreed that the yarns in the Bible were extremely good, for I pointed out that almost all the yarns that made headlines in the daily papers could be read in the Bible.

We were a mixed crowd, being Maltese, Belgians, West Indians and so forth, and spoke a pigeon English amongst each other, so that instead of simply saying 'Yes!' we all said 'Yes! Yes! me savy' and it was not until our last day at sea, after I had sworn for about a minute, quite fluently, that a chap came along and said he was glad that I was English as he came from Liverpool. But all this time the *Lapland* was ploughing her way across the Atlantic to Antwerp, where we finally moored up and I was paid off. So actually ended my trip across the Atlantic in *Diablesse.*

Chapter III

COASTAL CRUISING

1. TWILIGHT

This little yawl was 27 ft. 6 ins. on the waterline, 9 feet beam and almost 6 ft. draught, and was driven by 670 square feet of sail. With no overhangs at all she was a work boat pure and simple, and so this cruise gives an idea of a work boat on a passage.

Falmouth Quay Punts are without doubt weatherly vessels, for, as they were designed as handmaidens to the sailing ships calling at Falmouth for orders, they had to brave the wind and sea, summer and winter, between the ship and the quay, and when without a job they went seeking a ship away down channel.

Their mainmasts were cut off at the upper peak halyard block, to enable them to clear the yard arms of the ships they served.

So Spot and I, journeying to Norway to sail *Twilight* home to Cowes, had no fears as to her seaworthiness and ability to take what came in the way of weather, although some Norwegian friends, not used to this type of vessel, were doubtful of her ability.

On the way to Norway our steamer met a heavy gale from the north-east, which delayed her some hours, and as this gale was still blowing when we arrived at

Kristiansand, we waited three days for it to ease down, for whereas at sea a small vessel manfully rides it out, it is wrong to start out in a gale, and Marine Insurance Companies of small vessels would, I think, be within their rights if they refused to pay insurance on a small vessel that, without just cause, put to sea in a full gale.

And so we waited, and on Thursday, April 29, 1926, put to sea at 5.00 p.m. with three reefs in the mainsail, a reef in the staysail, and our jib and mizen unrigged and stowed below in the foc'sle. The driving sails are those in the centre, and not at the ends of a vessel, and even with this small amount of sail *Twilight* had all she could carry, for there was still plenty of weight in the wind, and a high sea running from four days of a hard gale that was only just starting to ease.

In the first 24 hours we travelled 125 miles, and considering the sea running and the overall length of our vessel, this pleased us. Day followed day, and still it blew hard and cold from the north-east, and coming down to the Dutch coast we headed in for the *Terschelling Light Ship* on Saturday afternoon to check our position. The sunset looked wicked, and fearing an onshore gale from the north-west, I let her go on out to sea again without sighting the *Terschelling*, so that, when the gale arrived, we should be able to drive away before it for days if necessary without fear of that lee shore.

We drove and drove her out towards the centre of the North Sea. Besides the three reefs in the mainsail the gaff jaws had been lowered on to the main boom, so that we only showed a small triangle of mainsail and the staysail. Even with this small amount of sail we were travelling so fast that *Twilight* trembled throughout as she rushed down the face of the seas.

At 3.00 a.m. Spot yelled for help, as he could not hold her on her course, and jumping out of my bunk to his assistance, I was just in time to see a huge sea curling in over the stern the height of our mizen mast. We were pooped, and very heavily; I was knocked backwards into the cabin but not hurt, and was soon on deck stowing the rest of the mainsail, after which *Twilight* with only her staysail set was easier to steer.

Turning in again I left Spot at the helm, still fighting to clear the Dutch coast. Later that night, with only the staysail on her, she started pulling seas aboard again over her transom, so we streamed the drogue out aft, and, lashing the tiller, let her drive very slowly before the gale, which was fortunately due north, so that we could by now drive the full length of the North Sea from the north of Holland to France without fear of land.

We took turns watching for ships that might run us down till daylight, when we both turned in for the day. That heavy sea we had taken aboard had, in spite of her self bailing cockpit, filled her above the level of the bunks, but we slept in wet clothes and bedding without harm, although it was bitterly cold. After laying to our drogue for 24 hours, during which time no really heavy water came aboard, we were able to haul it in and drive on under staysail only for some hours, when the wind easing still more allowed us to show the peak of our mainsail.

In a gale of wind a small vessel can either heave to under sail or lay to a drogue, generally referred to as a sea anchor by yachtsmen, but always as a drogue by our lifeboatmen, who look upon it as the most important part of their equipment. In days gone by the sea anchor meant the anchor to seaward and the shore anchor the anchor nearest the shore; but yachtsmen all over the world have adopted, rightly or wrongly, the words sea anchor for drogue, and so throughout this book the words sea anchor mean drogue.

Aboard *Typhoon* in November 1920 we tried to heave to, bow on to a sea anchor, putting a terrific strain on the warp without once laying head to wind. It is easy to understand why a boat will not lay bow on to a sea anchor, for in the hull there is far more windage forward through higher freeboard, and there is also far more windage in spars and rigging aloft forward, both tending to blow her bow off, while under water she has a deep keel aft, and her fore foot is generally cut away, so everything is against her laying head to wind.

Typhoon's behaviour convinced me of the folly of trying to heave to head to wind and sea, and I decided that the next time I was caught in a fair gale and unable to run before it any longer I would stream the sea anchor astern. And *Twilight* justified my convictions, laying quietly with hardly any strain upon her sea anchor, beside which the warp over the stern was clear, and so had nothing to chafe on, such as bowsprit and bobstay.

To my mind in a gale ahead a vessel should heave to under sails, when she will, however slowly, proceed on her course, while with a gale astern she should stream a sea anchor aft when the gale will drive her on her way.

Later on the wind eased enough to allow us to set our three-reefed mainsail, and once more we sailed gaily for Cowes. On Tuesday afternoon we reckoned to sight the South Foreland in half an hour, and we saw it within twenty minutes. After five days at sea this seemed good, but navigation in the North Sea in clear weather is not difficult, and we had been able to take a noon sight for latitude every day but the one on which the sun had not shown through, and as we had not seen any land since Norway we knew we must be running near the middle of the North Sea.

Shooting the sun with a sextant requires two hands, one to hold the sextant and the other to work the vernier, and generally in a small vessel one man holds the navigator, and this leaves his hands free. But as we were only two and Spot was steering, I had to take sights alone, and found it difficult. Years ago leadsmen had a platform in the chains from which to heave the lead, and such a platform, easily rigged in the main and mizen shrouds of a small vessel, would enable the leadsman or navigator to use both hands for the lead or sextant, as it would have a device for gripping him round the waist.

It was cheering to see the Foreland, as it seemed that now we should storm along to the Wight in smooth water under the lee of the land. Just before the noon sight the wind had eased enough to allow us to carry full mainsail, and soon after the spinnaker was set, but this was only for an hour, for a squall out of a clear sky hit us, bursting the spinnaker and springing the boom. The remains were sadly gathered in, and the wind continuing to freshen forced me to take in one reef after another until all three were in again, and we could do no more but lower the gaff jaws on the boom again.

After rounding the Foreland we re-set the three-reefed mainsail and tore along the coast in fine style, thoroughly enjoying the comparatively smooth water of the Channel after the steep tumbling seas of the North Sea. The reason for the seas breaking so badly in the North Sea with northerly gales, is that the seas running south are always running into shallower water and so are tripped up, just as the large Atlantic seas roaring in on the Continental Shelf cause the chops of the Channel.

All went merry as a marriage bell till we were half-way between the *Royal Sovereign* and the *Owers*, when we were suddenly and unexpectedly becalmed, almost within sight of the Wight. During this calm the mizen was bent and rigged and the jib also brought up from the foc'sle and set, and we attempted to sail without wind, about as sensible as trying to skate without ice. For twenty hours we lay idle, watching the reflection of the sails, which seemed to go down under the water for miles.

As suddenly as we had been becalmed the wind came again as strong as ever. We stowed the jib, but not before the leach had blown away, and then took in the mizen, and for a time forced *Twilight* to carry her full main, but it was too much for her, so the three reefs were tucked in one by one very reluctantly, for after the calm we did not like the thought of shortening sail.

The wind was still fair, and we chased away before it past the *Owers*, to the Island through the long dark hours. Our course through the Forts and Spithead was a wild rush, and we arrived off Cowes at dawn. The wind was north, so as we steered up the Medina we brought it aft, and half a mile from our anchorage we stowed all sails. Even then we had far too much way on when we arrived, which gave us an idea of the wind's strength.

We had arrived after a 6½ days' passage from Norway, one day of which was spent hove to, another becalmed, so in 4½ sailing days *Twilight* had made the passage from Norway to Cowes under a three-reefed mainsail, and at times only a staysail. Damage sustained: carried away topping lift, sprung spinnaker boom, burst spinnaker, and blew away leach of jib.

During the run down through the North Sea the breaking seas were so full of phosphorescence that they lit the sails, and the effect on those dark nights was that of lightning, and so tiring that we could at times only steer for 1½ hours at a stretch.

Twilight, designed and built in 1904 by W. E. Thomas of Falmouth, is a fine example of a Quay Punt, and is a credit to her designer and builder, for she withstood the gales of the North Sea manfully and inspired us with confidence throughout our stormy passage.

Many people consider that the Quay Punts are heavy displacement and cumbersome vessels, but this is wrong, for evolved for service in the heavy seas found off the coast of Cornwall, they are normal and natural in all their proportions. Indeed *Twilight*, excepting for 10 square feet of sail and an inch of draught extra, is exactly to the ideal proportions[1] for cruisers, although I had not considered her when I drew graphs of those proportions, as they were made from vessels designed for pleasure and not work. I hope that *Twilight's* passage, and this description of her, will dispel the fallacy that Quay Punts are unwieldy vessels.

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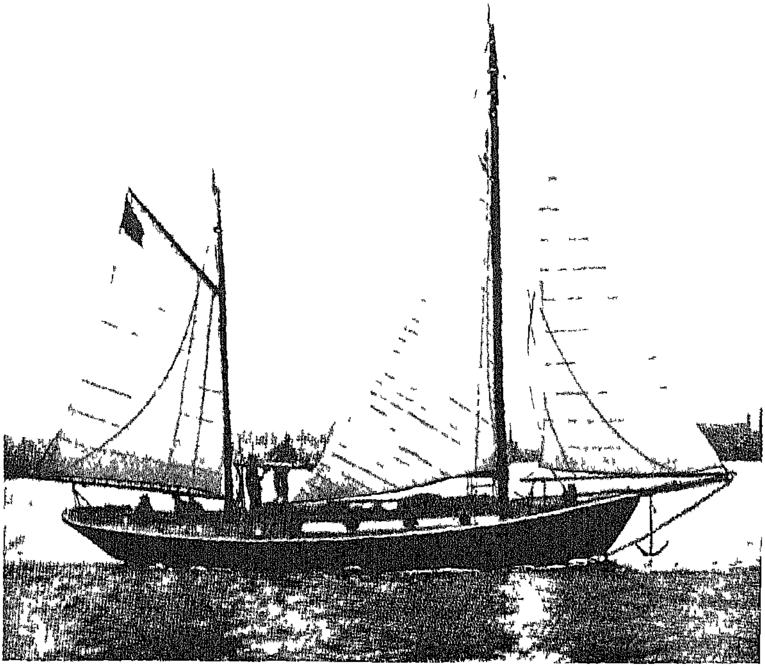
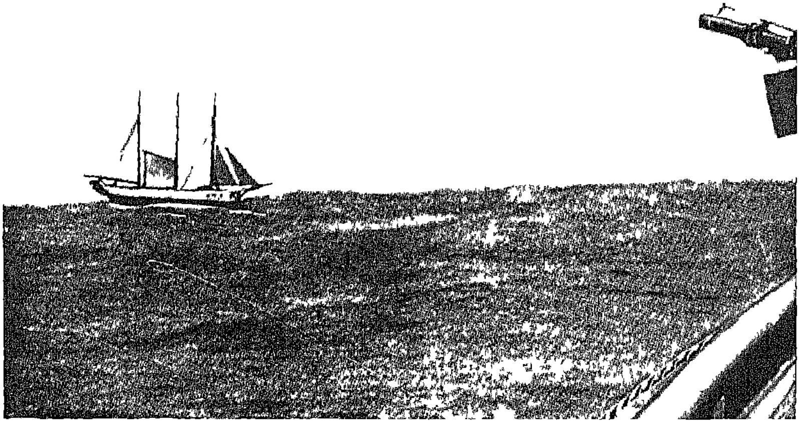
[1] To be found in my book, Sailing, Seamanship and Yacht Construction, page 47.

THE AUTHOR

From a charcoal sketch by Rolf Armstrong, 1933

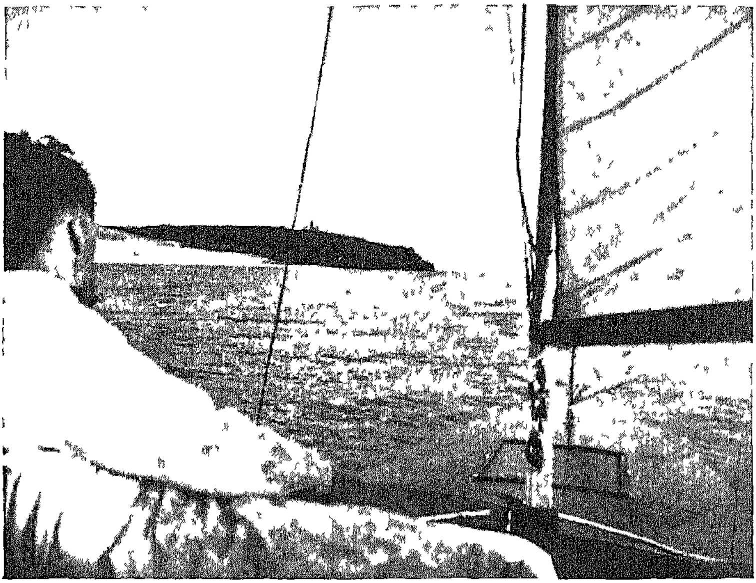


Typhoon with jib, mizen and *Dolly Varden's* trysail set, sailing towards Hell Gate

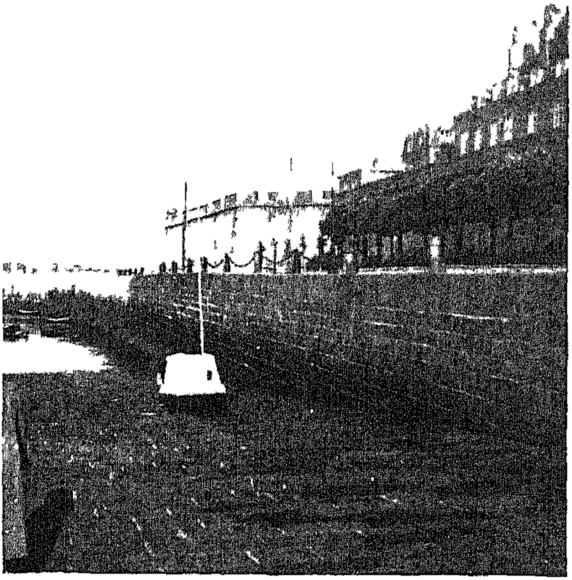


With full jib and mizen, at six knots *Typhoon* passed a three masted schooner hove to

Fifteen knots was the highest speed attained by *Brynhild*



Brynhild approaching Cape Carteret just before our battle with tides, rocks and a heavy squall

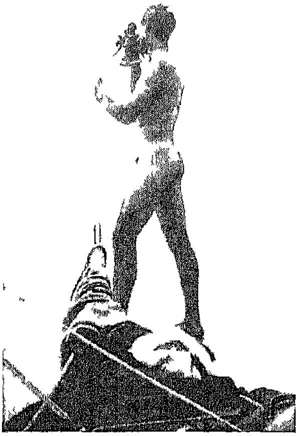


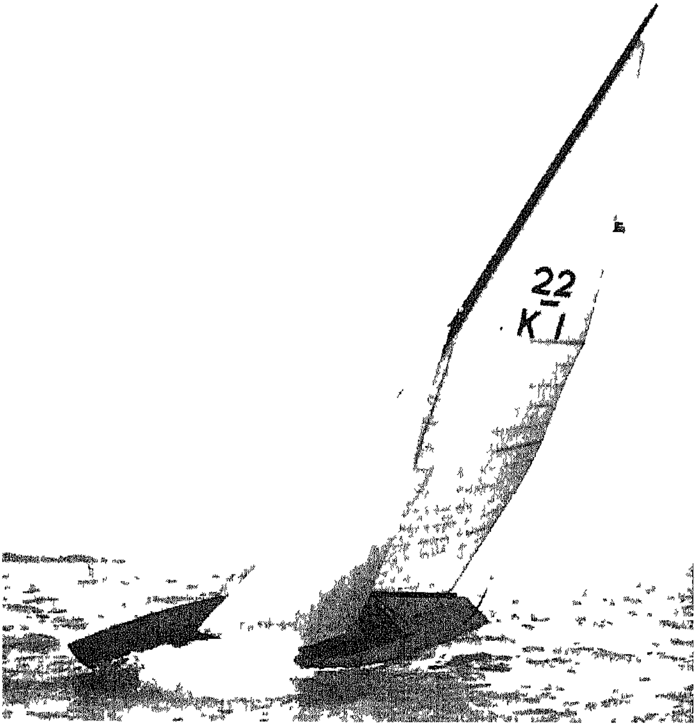
Brynhild on the slipway of Saint Malo. The walls of the city can be seen above

Vigilant lifted out of water and scudding along at ten knots

A small vessel must not load herself with useless gear, so the sextant mirror was used for shaving on board *Vigilant*

'Modesty is only a sense of physical imperfection.'
(The author taking a sight on board *Vigilant*)

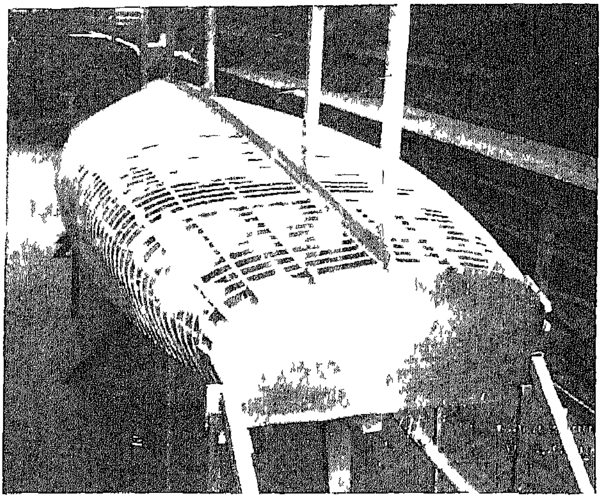




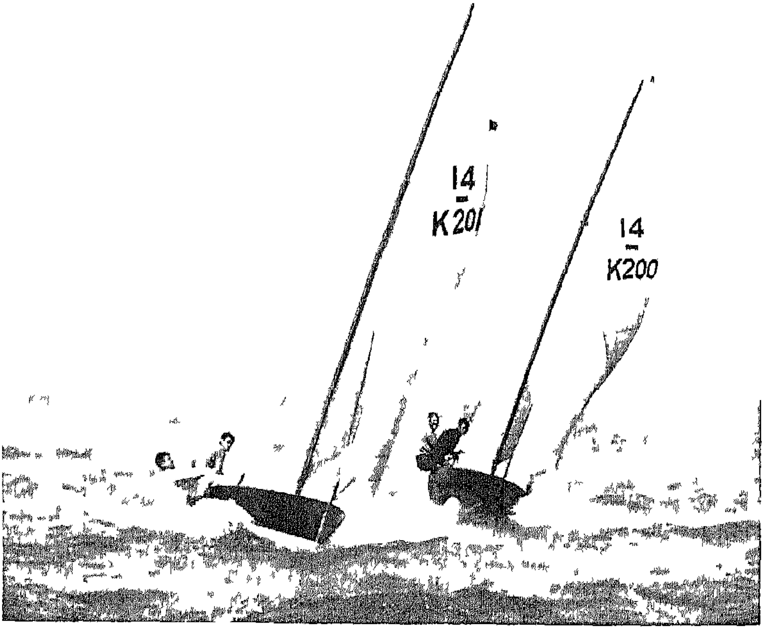
Vigilant

Avenger carried full sail with only two aboard when racing on a day when 8-metres and other craft raced with two reefs in

Avenger won 57 prizes in 57 starts 52 firsts, 2 seconds, 3 thirds

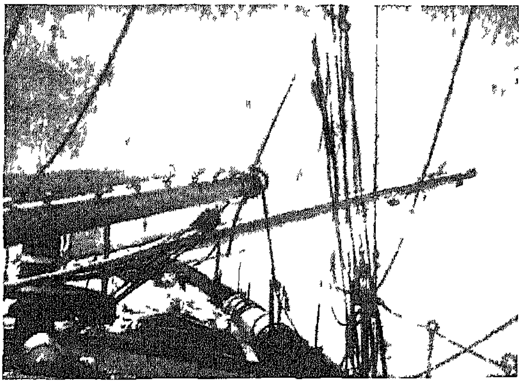


Avenger timbered out Stern view

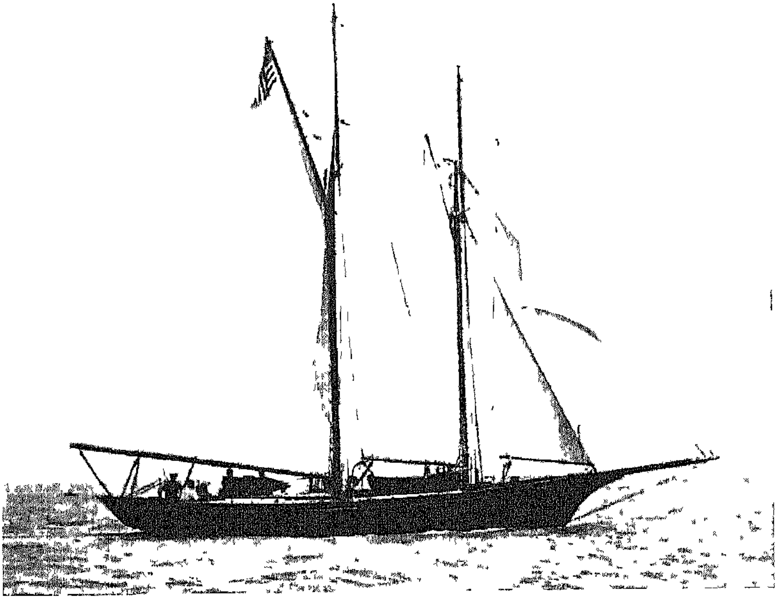


Daring and *Pintail*

Bobby Somerset, *Diablesse's* navigator

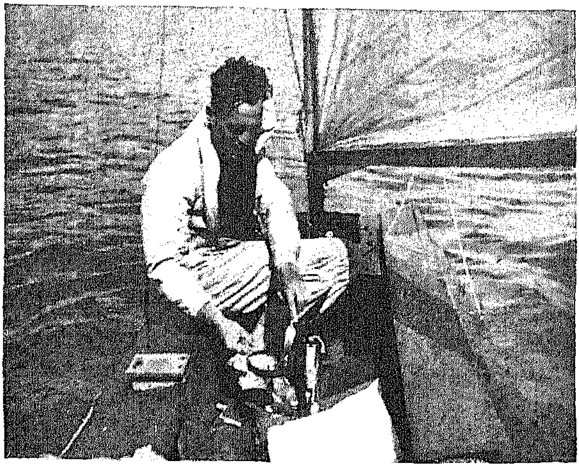


Diablesse running south to the trades

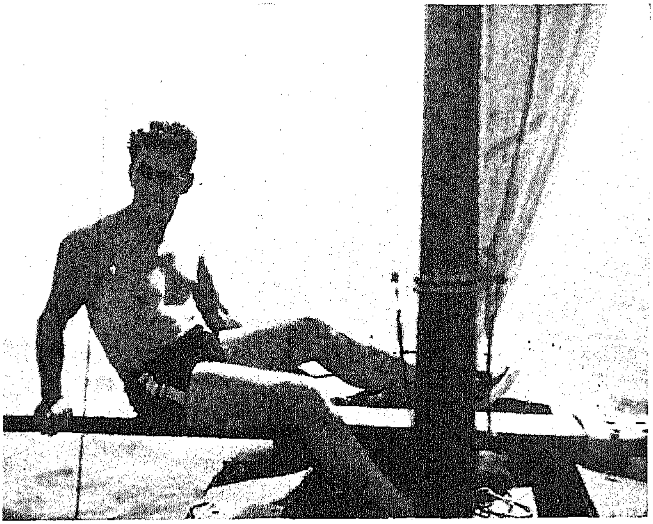


Diablesse

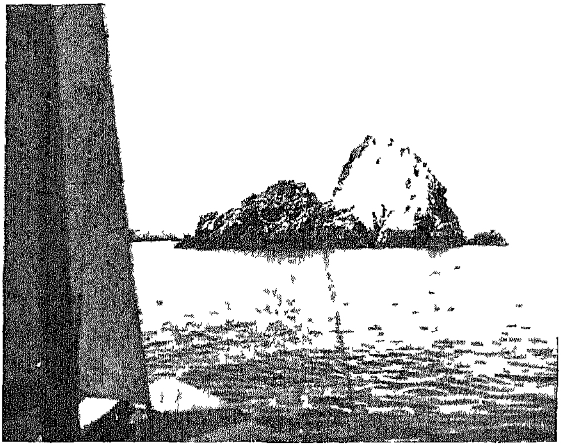
Valhalla's whaleboat



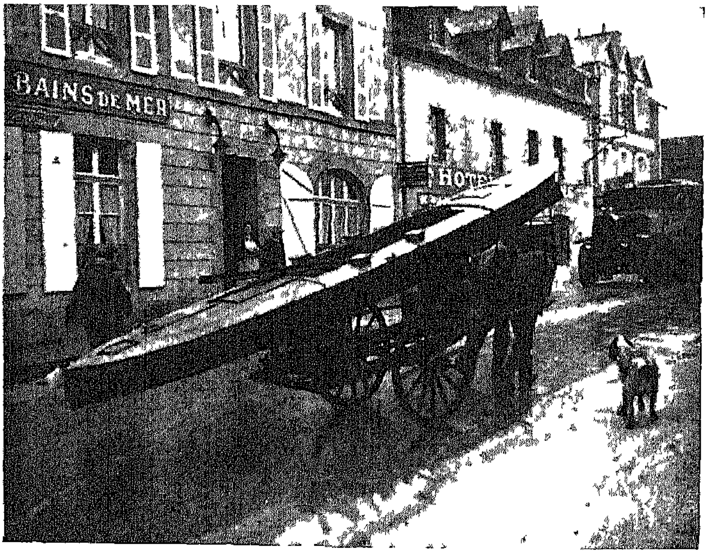
Bill cooking off Chausey between the squalls. Fore hatch open, his sliding seat is unshipped and laid along the starboard side. *Brynhild* almost becalmed



The days were few on which I could wear my favourite costume. (The author at the helm of *Brynhild*)



The tide line easily seen from *Brynhild* on the white-washed rock Le Pommier The beauty of such marking is that the seagulls keep it white for ever



We stored *Brynhild* in the cellars near the champagne and wine at Hotel des Bains

2. *VALHALLA'S* WHALEBOAT
(COWES SEA SCOUTS)

Though 30 ft. 6 ins. overall, Valhalla's *whaleboat had a beam of only 5 ft. 6 ins. and the hull itself only weighed 850 lbs., so it will be seen she was a light and very easily driven craft.*

'O'er the glad waters of the deep blue sea,
Our thoughts as boundless and our souls as free.'

Our boat was a whaleboat off the *Valhalla*, and she was swift and seaworthy, climbing the waves as easily and gracefully as an ocean bird. Those who have not sailed in a lightly-built whaleboat have missed one of the greatest joys of sailing, for such a boat fills one with the buoyant hope that springy turf imparts on a sunny day. We had sailed our boat summer and winter for three years, and she filled us with the confidence of a tried and trusted friend, as she should, for the whaleboat is the finest sea boat ever evolved by man.

Developed for over 300 years in the hardest service of the seas, she could be nothing less than perfect. In her work she hung in davits high above the water in the heat of the sun, ready to be lowered with a rush whenever a whale was sighted. She was filled with 1,000 lbs. of gear, harpoons, and line besides her crew of seven men, making the weight this light boat had to carry in action with the whale close upon one ton. Away the boat would chase after the whale, rowing or sailing according to the weather; the whale harpooned (it sometimes weighed 80 tons) she might be towed by it at about 15 knots often dead to windward into the steep sea of a rising gale with night coming on.

The whale killed, the whaleboat would lay moored in its lee till daybreak, when she would probably be found by her parent ship, which had all night beaten to windward searching for her, and all would be well.

Or, as frequently happened, the whaler would be unable to find her boat, and after the latter had waited as long as it dared, she would make sail for the nearest land, which would probably be an island many miles away; and many whaleboat voyages of over a thousand miles are recorded.

Such was the breed of our boat, so no wonder she filled us with buoyant spirits, which I hope, and believe, all of us Cowes Sea Scouts, who learned sailing and seamanship in *Valhalla's* whaleboat, will retain till the end.

After three years of cruising along the coast between Beachy Head and the Start, we decided to sail across the Channel to Havre, and up the Seine if possible to Paris and return to Cowes, all within our two weeks' summer holiday.

With a rising glass we left Cowes in the last fling of the strong S.W. wind which had been blowing some days, and, with a fair tide beat down the Solent on the morning of Saturday, July 29, 1921. The day before, I had sailed from Lymington to Hamble aboard a friend's schooner under her foresail only and had then beat in my canoe across to Cowes against a wind that was strong enough to dismast three of the four 6-metres in the American team racing for the first time against Britain off Ryde.

We went ashore for the afternoon in Colwell Bay, just inside the Needles; for the flood tide, running up Channel all the afternoon, would be setting our whaleboat to leeward, and with her small drop keel and dipping lug we could not afford to start out with a lee-going tide; so we spent the time wandering over the hills at the west end of the Isle of Wight.

At 7.20 p.m. we set sail for France, and in two tacks cleared the Needles with the young ebb pushing us to windward; at 8.30 p.m. we were clear of the Island heading South by East, close hauled on the starboard tack, for Havre 100 miles away. With a crew of ten we divided into three watches of three, the jobs being look-out, main sheet man and bailer, with an hour on each job, so that each man did an hour at each job during the three-hour watch. Being Scoutmaster, I missed the watches, but steered all night; so, with four on, and six off watch, we settled down for the night.

The sunset promised a fine night, and although there was still enough wind and sea left to keep the bailer occupied, there was nothing alarming in the spray flying aboard all the while, and the six off watch slept soundly enough under oilskins and tents, which kept them fairly dry.

After steering all night, early dawn is generally depressing, but on this occasion the light stealing over the waters revealed the watch below, who had been invisible all night. The chaps were funny enough to make me laugh till I cried. Two pairs of feet sticking out from under the dodger forward were all that could be seen of the two stowed in there, two more were hung like hammocks with their necks on one thwart and the backs of their legs on the next. One of them, with his head driven well inside his sou'wester, looked so miserable as to be absolutely comic. Charles, who was 6 ft. 2 in., took up most of the foot board running down the centre of the thwarts, Bob had one arm round Charles, while the other was hanging loosely in the bilge water. We put the look-out man to sleep as it began to get light, so that the only two awake, besides myself, were Bill on the mainsheet and Spike bailing. I had to laugh again when one of the sleepers developed cramp and woke with a jerk, only to drop off to sleep again as quickly. At 8.00 a.m. I turned in after an enjoyable breakfast, giving instructions to be roused for trouble only, as the boys otherwise called me out of sheer kind-heartedness when they made coffee or tea. Napoleon used to leave orders, when turning in, that he was only to be called to hear bad news, and his example should be followed by everyone in command, for upon the brain of the man in charge of an army or a ship depend success or failure, and he must rest whenever possible, so that his brain is energetic and sparkles when needed, for often the time arrives when he can have no rest for perhaps 24 or 48 hours. And this he can endure, if he has not been tired out by unnecessary duty.

At 4.00 p.m., after eight hours of peaceful sleep, I woke to find the water no longer flying in fine spray over the weather bow, but instead much quieter, with the gentlest of airs, giving steerage way, but no more; and within half an hour of waking there was a flat calm. But as it was hot we put off rowing until the cool of the evening. Then at 8.00 p.m. we split into two watches for rowing, my watch taking the first four hours. A 15-ft. oar, even if it is spruce, seems long and heavy for a fifteen-year-old boy to row with for four hours, but they were all used to it, and took these shifts as a matter of course.

By 11.30 p.m. the two lights ahead, which had before only been visible when we were on top of the swell, were in full view, so Ivan called their flash while I timed them. They were Cap la Heve, every five seconds, and Cap Antifer, every 20 seconds, so we were just where we should be, 25 miles off, for they are 390 feet above sea-level. We kept rowing along at 3 knots with five oars, knowing that we only had another half an hour before the other five took our places.

At 4.30 a.m., half an hour after my watch had started on their second spell of rowing, they were delighted to hear me call 'Spell ho!' for a breeze was making from the S.W.; and setting our dipping lug to port we sailed south on the starboard tack close hauled, not quite laying our course. All the gang turned in, leaving myself to steer, tend to the main sheet, lookout, and to think and dream alone, yet with nine of the best within call.

So for three hours I was very happy with my thoughts, and I tried to fathom the mystery and fascination of the sea. Here we were, ten youngsters from 14 to 23 years of age, our second night at sea in an open boat, quite contented and perfectly happy, when we should have been full of anxiety and worry. We knew and respected the mighty power of the wind and sea, for we had been out when steamers had been anchored in St. Helen's Roads to shelter from strong S.W. winds which according to papers had blown 60 miles an hour. In one storm we had rowed with all seven oars hard at it on a lee shore just holding our own for 6½ hours till the wind eased and backed a couple of points. In a long calm we had run out of water and learned the meaning of: 'Water, water everywhere, nor any drop to drink.' So it was not ignorance of the sea, but knowledge of her ways, that brought us happiness, and that sense of security necessary for the handling of open boats in a seaway.

The fog that came with the dawn suddenly lifted at 7.30 a.m., and the high land ahead caused me to yell 'Land ho', at which all the nine woke up for their first glimpse of the France we had started out for. We sailed on, and came about fifty yards off the beach, 2½ miles to leeward of Cap la Heve, the tide and wind having set us that distance off our course.

It was not till 10.30 a.m. that we rounded the cape and saw Havre for the first time, a small bay with a clean beach and houses, and beyond, the town itself. So we washed, and smartened ourselves and our whaleboat up, and sailed through the breakwaters, entering Havre Harbour at noon.

We had taken 40 hours from the Needles into Havre, an average of 2½ knots, but none of us minded that at all, as we had come for a sail, and had we maintained the speed at which we started, about 7 knots, we should have been wet through and bailing hard all the way across, instead of basking in the sunshine. Cruising and sailing is surely pleasure in all weathers. If calms prevail there is the warm sunshine and fresh air to enjoy, if hard strong winds there is the pleasure and exhilaration of high speeds and a fast passage, while moderate winds have the charms of middle-aged people, who have put behind them the follies and recklessness of youth, and have not yet the ills of old age.

We wandered along the sea-front and then round the town of Havre, during the hottest day there of the year. Presently we heard Spike and Harry laughing, and when we went back we too laughed, for Charles had collapsed with the heat, and Spike and Harry were dragging him along to a grog shop to give him some cognac. Charles is 6 ft. 2 in. overall and fairly beamy, so quite heavy for two small chaps like Spike and Harry, who were weak with laughter. However, we gave him a drink and he came round in a minute to collapse again as suddenly, but within a short time was as right as rain again. Small chaps are generally tougher than large ones, and in the case of growing boys this must always be remembered by the man in charge; boys who have outgrown their strength must also consider this.

At 6.30 p.m. that evening we left Havre, and, sailing W.S.W. to the outer Seine buoys, bore away before a smart breeze and ran up the river with a strong flood tide. The channel between the sands at the mouth of the Seine is continually shifting, but, with our small draught, we found no difficulty in following its winding course, for there were red buoys to port and black buoys to starboard, and we were soon inside the sands, for the tide was running at about 6 knots. The tide was nearly high, so this part of the river, that till now had been idle of shipping, swarmed with steamers, and was very busy, as a river leading to the capital of any country should be.

We reached La Roque breakwater at 8.30 p.m. and tied up for the night. Some slept in a mud hut ashore, which seemed the home of thousands of rats, others were under our sail stretched over a fence, and I had the whaleboat.

Next morning (Tuesday) at 7.30 we awoke, and piling everything into the boat, were soon being carried towards Rouen with the strong rushing flood tide, and, after a wash, cooked and ate our breakfast. We then settled down to row, as there was no wind; but at 8.30 a strong breeze abaft the beam enabled us to hoist sail, and soon we were tearing along in fine style, though the wind was very uncertain, due to the winding river and its high banks.

At 10.30 tramp steamers passed us, some outward and some inward bound. Owing to the bar at the mouth of the river, they can only sail at certain times, reminding us of wild-fowl flighting at sunrise and sunset, for suddenly there are dozens of steamers, and then no more for another twelve hours. Noon found us off Duclair, and the tide turned against us, so we tied up to its tumbledown pier, and visited this small market town. After a feed we arranged some sports amongst ourselves, and spent that afternoon at tug-of-war, boxing, wrestling and relay racing, as well as sprinting and racing longer distances. To wind up with the gang set upon their unfortunate Scoutmaster and forced him to eat grass. At 9.30 p.m. the first of the flood tide made, so we left for a four hour row, mooring to a small island at 1.30 a.m. for our night's sleep. Seven of us landed and turned in on a lawn in front of an old house. We were soon wrapped in our blankets and asleep, having left the other three in the boat. We were not far from Rouen, and our reason for choosing this island was that in Rouen we should find no place to pitch a tent and sleep. We always took tents with us, but never pitched them unless it rained.

At 7.00 a.m. the owner of the house, which we had thought empty, came out, and so did his wife. Thinking that perhaps the seven sleepers in brown blankets might not improve the lawn, to his or his wife's eyes, we turned out, and taking the whaler to the end of the island, turned in again till 11.00 a.m. Then we made for Rouen with the young flood, reached there 45 minutes later, tying up alongside the small London steamer *Leelee*, and set out to explore one of the most historical cities of Europe.

We saw in the market place the tablet marking the spot on which Joan of Arc was burned, and, wandering into the museum, saw a queer old tiller of which no one knew anything, some very interesting armour, and also a sword and medal given by Napoleon to one of his officers.

On our way to the cathedral we walked through St. Romain Street and saw the big clock and fourteenth-century houses. We climbed the 812 steps to the top of the cathedral spire, and there met the Manchester Grammar School land scouts. They were walking to Paris from Havre, averaging fifteen miles a day carrying all their kit, which seemed pretty good going for youngsters. While at the top of the spire, we felt it swinging, for there was a hard wind blowing at that height, and we were told that it actually swung 6 feet, being 510 feet above the city. The solid, heavy-looking sky-scrapers of America looked ugly to my eyes when I first saw them, for I was so used to seeing the tall slender spires of European cathedrals and churches, which swing like trees to the wind.

After tea we set sail and were soon bowling along at 6 knots before a strong wind. Catching up with a tug towing at 4 knots, we lowered sail and tied on astern, for while in one bend of the river we could sail 6 knots, we could hardly do 2 at the next, so that it was easier to tow at a steady 4 all the while, and the river folk were very pleasant company. At 6.30 p.m. the tug moored up for the night, so we sailed on to one of the small islands, and went ashore to cook our evening meal. After an hour ashore we set sail once more, finally turning in for the night on an island about nine miles above Rouen, and as there was no rain we could continue to have the sky full of stars for our roof.

Not pitching tents makes for ease in getting under way each morning, and this was useful, for at 6.00 a.m. the tug which had towed us the previous day came abreast and, sighting us, blew his whistle. We were up, piled our blankets into the boat, and, rowing out into the river, caught the fourth and last of the barges she was towing, by the time it was abreast of us. We washed and dressed while we were being towed at 4 knots towards Paris.

At 9.30 a.m. we came to the first lock, and entering, rose 8 feet before continuing on our way. This lock only took three-quarters of an hour to pass through, but the next took three and a half hours, as there were so many barges and tugs waiting bound up or down the river. While in the lock, we almost lost Bevvy for ever, for although he reckoned to speak French well, he had to fall back on a French-English Dictionary, and the match he asked for was a love affair instead of a thing with which to light a stove. However, we rescued him with shrieks of laughter, and continued on happily. In that lock we rose 15 feet, and gaining height, the river became more beautiful, though this seemed impossible, so lovely had it appeared below

Rouen. At times the river wound round a hill, and then away for miles would stretch a scene that might have been part of dreamland.

As our tug finished towing at 7.00 p.m., we rowed on to the next lock, arriving there at 1.00 a.m. We tied up to the second fleet of barges from the lock, for we wanted a tow through behind the first fleet when they started, so did not wish to disturb their sleep and annoy them now, for ten cannot turn in on a 30-ft. open boat without a certain amount of noise.

At 5.45 a.m. wild shrieks from three tugs' whistles awakened us with a jerk. All the gang seemed irritable, and no wonder, for it is hard on the nerves to be awakened suddenly by piercing shrieks from three steam whistles; I think everyone prefers to be awakened by a cup of tea, two biscuits, and a charming voice saying:

'Awake, for morning in the bowl of night
Has flung the stone that puts the stars to flight.'

We moved close to the lock, and as soon as the fleet of barges had formed two deep inside, we squeezed in, and tied to the last barge for the day's tow. The gang turned in, leaving myself to watch our boat through the lock, and steer her till the next one.

At 10.30 a.m., as we were about to enter another lock, I woke the gang, who by now had had nine hours' sleep. We had quite a lot of fun at each lock, for then the gang went shopping, and Spot brightened us all up this time by buying a tin of baby's food instead of jam, and, not to be defeated, spread it on his bread and butter. At 3.30 p.m. we came to another lock, and had a swim whilst the fleet packed themselves in. Leaving at 4.30 p.m. we towed until 6.00 p.m. when the fleet moored to the bank for the night, two miles below an imposing town with a cathedral which from that distance looked similar to Westminster Abbey.

We made sail, and reached along with a nice breeze, soon arriving at the town, which was Mantes. We visited the cathedral, and, after filling our breakers with water from the fountains, had a bathe, and then continued our way to the next lock. As we passed under the town bridge a Canadian canoe with two men rowing attempted to race us. At first we went easy to take their measure, and then opening out soon left them behind. We rowed on, and finally tied up just below a weir with its roaring water. There was a strange charm about these night journeys under oars, tiring though they might be. The trees and banks reflected in the calm waters of the river gave everything an unaccustomed and weird appearance.

At 5.50 a.m. two Frenchmen came alongside to see who we were, and we discovered that our fears of the night before were correct, and that we had come up a blind alley to the weir. Although the lock was only 100 yards on our starboard hand we had to row three miles to reach it. So back we went, and then doubling once more, rowed to the lock. Here we enquired the distance from Paris, and found that it was 70 kilometres by the river although only 45 by road.

We walked into Meulan to talk things over during breakfast, for our money was getting low, and as we had been a week reaching this far, we should take a week to retrace our steps, by which time our holiday would be ended. So we reluctantly decided to return home without reaching Paris.

All the way we had not seen a single steamer bound for Paris. We had hoped to be able to tow at 8 knots or so behind some small freighter, which would only take minutes to go through locks where the tugs with their barges took hours. However, it is always sad to think what might have been; and at 10.15 a.m. we made fast astern of the last of a string of five barges just leaving the lock, bound for Rouen at a steady 4 knots.

At 2.30 p.m. a motor barge with only two barges in tow caught us, and, as she was doing 6 knots to our 4, we let go our barge, and rowing at about 5 knots dropped alongside her. Jammer made a wild leap aboard the second barge, which was high out of the water because it was so light, and making fast our painter on her bollards, slid down the rope into the whaleboat quite neatly. After towing us for three-quarters of an hour, the tug sheered towards the bank just above a lock, and paying out more of our towing line, we were able to sheer still more towards the bank, and Spot leapt ashore to see if the steamer blowing astern was British. She turned out to be the *Swallow* of Grimsby, so we rowed over to the lock, which was a small one. Directly she was in, we squeezed in astern. The *Swallow* drew 8 feet of water and travelled at 8 knots, and her skipper volunteered to tow us. She was in a hurry, as her sister ship was held up in the Channel by heavy weather, the two trading between Paris and London with general cargoes. Towing at 8 knots with the banks so close each side gave us an impression of great speed in our boat, but not so much to the five of us who, being aboard the *Swallow*, were higher above the water. At 10.15 p.m. the *Swallow* tied up just above Amfreville Lock, and we turned in for the night on her after-deck. At 8.30 a.m. we moored alongside the quay at Havre and bought in the market place enough food to take us home to England, and stowed it all aboard the whaleboat.

The *Swallow* was unable to leave till Monday, so we continued where we left off with our exploration of Rouen.

We looked over the tower in which Joan of Arc was imprisoned, another in which she was tortured, and saw the doorway through which she was led to the market place to be burned. Then we saw the crypt in which William the Conqueror was buried, and visited various other places of great historical interest.

In some of the streets the houses were very very old, and leant across the street farther and farther with each storey until they practically met at the top, and so shut out the sunshine and fresh air.

On the way back we met Sir Percy Armitage, who, besides being Commissioner of Scouts for Cranford, was Gentleman Usher to the King, and we had a most interesting yarn, for he had raced and sailed in all sorts of boats from *Britannia* downwards.

At noon on Monday, August 8, we left Rouen homeward bound astern of the *Swallow* at 8 knots. A steamer like the *Swallow* is forced to take three pilots up the Seine; the first takes her through the shifting sandbanks at the mouth of the river, the second from Havre to Rouen, and the third from there to Paris. So it is with a steamer outward bound, and we lost our lively Albert at Rouen for another pilot with no energy at all.

By 7.30 p.m. we were at the entrance of the Tankerville Canal, and as there was far too much sea, due to strong N.W. winds, for the pilot to take the *Swallow* out, she anchored and we tied up to the piles alongside the lock gates awaiting high water, for we hoped to go through the canal and so save the dusting we should get in the Seine estuary.

On the way down we had shipped quite a lot of spray, for we had been towed against that strong wind at 8 knots with a fair tide and in some of the reaches of the river where the wind was dead ahead there was quite a sea.

At 10.15 p.m. we pushed off from the piles, for the young flood in the Seine rises so rapidly that if our boat had been caught for thirty seconds only under a notch in a pile, she would have filled. The Seine bore, of which I had been rather afraid, only shows itself during the spring tide of the equinox; but it is far better to be sure than sorry, and on our way up the Seine we always waited till the bore should have passed before getting under way. A wall of water, 8 feet high, travelling at 10 knots, is not a thing to take chances with in an open boat with nine youngsters, whose mothers looked to me for their safe keeping.

At midnight we entered the canal, and here for the first time we were expected to show ship's papers, passports and so forth. We had none, so I signed the book 'Cowes Sea Scouts' and all was well.

At 6.00 a.m. the two tugs that locked through with us got under way for Havre, and as we had carefully tied up to one before turning in we started away for Havre with the gang still asleep, while I steered. At 8.00 a.m. I routed them out, and we cooked and ate breakfast. Then several of them washed in the canal, and held forth on the virtues of cleanliness until we passed a brown and white dog blown up like a balloon with its four legs pointing skywards, doing, we reckoned, half a knot under bare poles, when we who had not washed laughed loud and long at the expressions on the washed faces.

After arriving at the Havre locks and dropping 14 ft. we took half an hour to reach the breakwater entrance and, passing through, started away for Cowes. After a while we tied up to a bell buoy about three miles off Cap de la Heve, for the strong N.W. wind of the night before had faded away, although it was still in the same direction, and so dead ahead, and too light for our small sail area. There was still a heavy swell rolling in, which occasionally broke, and after laying to that lurching buoy for 1½ hours our warp carried away. We therefore set sail, for the wind had veered to north, so that we could lay our course within a point.

The relief of sailing after being tied to a rolling bell buoy can hardly be described, and we were all very happy and contented to be at sea once more, with our boat just flicking the tops off each wave. At 7.00 p.m. we were 16 miles away from Cap de la Heve, then the breeze veering still more, and freshening, sent us along gaily for the Island. Sunset was most inspiring; at 8.30 p.m. the sun, looking like a great red ball of fire, just touched the horizon, and we quite expected to see great clouds of steam arise from it. At this time the clouds were wonderfully red at the top and golden below; the changing colours of a sunset at sea are one of the wonders of the world, and beyond the powers of any pen to describe.

In that night's sunset the mackerel clouds overhead were a cold blue and a warm red, and where the sun sank the clouds were red with golden curls, giving the promise of a fine night. Although a dawn at sea is often lovely it is not so grand as sunset, for red in a sunset means a fine night, but red in a dawn gives warning of strong winds, and thus has a sinister appearance. At sunrise and sunset the Lord tells those who understand the weather for the day or night.

At 9.30 p.m. Cap de la Heve light was under the skyline, so we were twenty-five miles on our way, and the flash of St. Catherine's, seventy-five miles distant, was visible in the sky. This is only a sixteen-mile light, as it stands fairly low, but being the second most powerful light in the world its beams caught the clouds above strongly enough to be visible almost across Channel. This was a great help to me, for steering all night looking into a compass is trying to the eyes, whereas steering all night at distant flashes in the sky was nice and easy. From 10.30 p.m. till 1.30 a.m. we had a strong wind and slid along at 7 knots; with the wind came a ghostly mist, so that at midnight everything looked unreal. The bellying sail, the mast, the eight sleepers and the one bailing, all seemed airy and misty forms, and even the sides of the whaleboat seemed flimsy, and not at all solid. But at 1.30 a.m. the wind died away, so that we had only just steerage way, and with the wind went the mist.

The sunrise was a fiery and angry red, which meant wind before the day was out, perhaps more than we needed, so I routed out Bill to take charge while I had some sleep before it came. The calm continued meanwhile, so at 9.00 a.m. we started rowing and after two hours sighted the Island, looking like a low bank of clouds on the skyline. We rowed quietly till 4.00 p.m.

when the promised wind came with a rushing squall; we then stowed oars and, setting sail, were just able to lay N.N.W. close hauled, which, with a weather going tide, would just take us into Brooke Bay.

With the ten of us sitting out to windward we were only sailing at about 5½ knots, for sheeted down hard we were too close to the wind for our boat to show her speed.

At 7.00 p.m. we eased sheets, having decided to spend a night at Ventnor, for, by the time we reached Brooke, the flood would have made, and our whaleboat would not beat against a 3-knot tide to the Needles' Channel and home. In landing at Brooke we should ship water, and so soak all our blankets, but Ventnor, in the lee of St. Catherine's, would have fairly smooth water. With the wind abeam our speed jumped from 5½ to 8½ knots, and at 9.00 p.m. we landed at Ventnor for the night, to be anxiously asked by the coastguards what ship we were from, as they had been watching us in the sea running outside for hours through a telescope, and thought we were a ship-wrecked crew. The gang turned in on the beach, while I slept on the boat. The next morning, Thursday, August 11, we left Ventnor with a fair wind and tide for Cowes, and rounding Culver Cliff came upon the *Britannia* and the other large yachts racing without their topsails. When *Britannia* races without a topsail the wind is quite strong. Arriving at Cowes we went aboard *Diablesse*, to find that her owner and his wife were aboard H. Fiennes Speed's yacht, so we went there too for a yarn. Then we sailed on up the river to our club room, and home to tea, after thirteen days of strenuous but enjoyable voyaging on sea and river.

Our whaleboat had made her first voyage across channel successfully, and although we planned in future years to cruise down to Spain, she never sailed that far, for we never had long enough holidays. In later years she twice crossed the Channel, her best run being from Cowes round Bembridge Ledge to Cherbourg in twelve hours, the distance being 84 miles. Her average speed on that occasion was 7 knots, which is quite a high average for a 30-ft. open boat to maintain for such a distance, especially when it is considered that her crew were growing boys. Her days are ended, but she will always remain in the memory of her grateful crew as the best sea boat in the world.

All this sailing and passage making gave me so much pleasure that it was hard for me to think that I was learning my trade as a designer and builder through it, but nevertheless looking back I know that the time was well spent, as I gained a great deal of experience which otherwise I should never have known; and so with these and a great many other cruises, as well as races, behind me I started in as a designer and builder.

If we are wise we start off with small things, as then we are able to take the whole job in our mind's eye and develop all its details with understanding; after we have mastered the small jobs we are able to tackle larger ones, and so my first design was to the National 14 ft. class (these 14 footers were made International some years later).

Chapter IV

THE DEVELOPMENT AND RACING OF THE INTERNATIONAL 14 FOOTERS

1. *ARIEL*

My next boat was the National 14-ft. dinghy *Ariel* (for the dinghy class had yet to be made International). She was my first attempt at designing a racing hull, and I went cautiously to work, for while I had very decided views upon the fastest shape to the 14-ft. rules I did not think it wise to go straight to them, but rather to go halfway between them and the then accepted ideas in dinghy design, for I was a young and unknown man designing for the first time against world-famed designers. *Ariel*, therefore, was not a true conception of my ideas, but a cautious design that could not be a failure, but which would yet let me know how true my ideas were; for I was convinced that a light hull could be driven, so that she would rise and plane along the surface of the water like a speed boat, and that certain characteristics that made for planing could be worked into a design.

At this time a great many of the 14 footers were rigged with a single gunter lug stepped well into the bow, and this I considered to be unseamanlike, for the weight, pressure and leverage of the whole rig was right up in the eyes of the boat, inevitably causing her to bore by the head, and to steer badly when running before a strong breeze. Because of the narrowness of the boat at this point, the rig was most difficult to set, and so with *Ariel* (against most people's advice) I put the mainmast back practically a third of her waterline length from the fore end where it could be stayed and the boat would be able to carry it.

At this time 14 footers were also practically all rigged with the ordinary tie down reefs, and as I was firmly convinced that a vessel should be able to make and take in sail to suit all winds from calm to gale during a race, I fitted her with roller reefing gear, once more against the advice of all the critics. Whereas the racing gunter lug was set on a single halyard, which was made fast to the yard, some two-thirds from the heel, *Ariel's* set with two halyards, the peak halyard shackling to a span one-third from the heel, and requiring no adjustment at all during reefing, the other halyard being the normal throat halyard attached to the heel of the yard, so that to hoist sail one hauled away on the peak halyard until the shackle and span were hard against the mast head and the yard sitting upright from the top of the boom and just standing over the top of the mainmast. Then the throat halyard was set up and the yard went straight up into the air, and the lug set, so that in reefing one simply eased away on the throat halyard and hauled in on the reefing line round the boom until the sail was reefed to suit the wind blowing.

Overlapping jibs were not used for windward work at this time, but *Ariel's* came well abaft the mast, for I knew that as it was set on a very thin light roller I could make it smaller if it was too large for windward work.

All these arrangements justified themselves in practice, and during Cowes Week *Ariel* won every race in her class, as well as giving me the confidence and courage to proceed with the ideas I had developed.

Ariel also gave me a great deal of pleasure, for my wife and I (we were still single) used her for day cruising, and several times sailed her round the Isle of Wight, close on 60 miles for a day's sail. So though a small boat *Ariel* played quite an important part in my education of the way of a ship at sea: the most important being that a man should have the courage to carry out his convictions.

2. *RADIANT*

After *Ariel* I started my career as a yacht designer and builder by building to the 14-ft. dinghy class boats with more advanced ideas than *Ariel*. The next boat designed for myself was *Radiant*. She also was primarily an experimental boat; though convinced that the type of hull that would plane would win many races, I wanted to make sure that she could not be beaten round a normal course by a dinghy with a very steep rising floor, which makes for a very low wetted surface, for earlier I had seen the way the narrow plank on edge with its low wetted surface could knife along on all points of sailing, and so *Radiant* was designed and built with a high rising floor. I knew she could never lift and plane along at the top of the water as I felt a dinghy should, but would rather knife her way to windward and to leeward at a speed that might keep her ahead of the planing type. Then too little seemed to be known as to the proportion of mainsail to fore triangle, and as to which made for the best all round rig, so *Radiant* was given many different rigs, all consisting of gunter lugs with the headsail. In one, the mainmast was so far aft, the mainsail so small, and the headsail was so large, that I was continually being asked which I called the mainsail, while going to the other extreme, I stepped the mast far nearer the bow than I knew to be good; and from these various rigs I learned that a small mainsail and a large fore triangle made for a very fast boat down wind, for with this rig we sailed clean away from the fleet to leeward, but directly we came on to the wind the boat was lifeless and dead, and the others could all sail past us. We finished last practically every time we used that rig.

On the other hand, the large mainsail and small jib made the boat very fast to windward, but slow and sometimes unmanageable down wind. All these rigs proved that with 125 sq. ft. by I.Y.R.U. measurements, the best proportion for all-round work was 20 per cent. in the fore triangle and 80 per cent. in the mainsail, which placed the mast on a 14 footer just 4 ft. from the fore end of the stem, 8 in. forward of one-third of her water-line length.

All this time *Radiant* had shown that while she was fast to windward and running, directly there was breeze enough and there was one reach on the course, the type that would plane would have the advantage and lead the way home.

I did no cruising in *Radiant*, for she was too unstable for enjoyable and careless sailing. But by teaching me the correct proportions of sails in the 14-ft. class, and that the steep rising floor craft was generally slower than the planing type I was developing, she taught me two valuable lessons, that have stood me in good stead ever since. And although only an experimental boat, *Radiant* was fast enough to bring me in second in the first race for the Prince of Wales' Cup from the Royal Yacht Squadron, though there was a big fleet of the best dinghies and helmsmen from all over the country.

3. AVENGER

Avenger, my next boat, as would be expected, was practically a complete embodiment of the ideas I had developed, and she justified them to the extent of winning 52 first, 2 seconds and 3 thirds out of 57 starts, in races that took her all over this country and across channel to France, meeting the best 14 footers of both countries.

I had designed and built *Avenger* in the late summer, so as to be sure of her being ready for the next season's racing; and though I showed her to a great many first-class helmsmen, with long lists of ownerships behind them, not one of them would let me build him a boat like her, for none of them could realise the hours of thought and development that lay behind her design. I could not blame them, for though I had felt her design was good several years earlier, I too had been overruled by existing ideas, and had only gone halfway towards her in earlier boats. Had others been built to her design, she could never have had such a wonderful record.

Avenger's year saw an alteration in the Y.R.A. rule, which previously had only allowed spars of 15 ft. 6 in. in length, and forced us into the gunter lug. They now allowed a mast all in one providing it was jointed like a fishing rod, and no part of it exceeded 15 ft. 6 in. in length. The best way to make a jointed bamboo spar was to buy a spar long enough to form the mast and which could be sawn off at the 15 ft. 6 in. mark, as only then could one be sure that the spar was exactly the same shape and size at the joint, and that the socket would fit it perfectly. So immediately this rule came in I bought every bamboo in the country, of the size and length suitable for the International dinghies, having previously tested out several masts for size. This is the strange thing about the rule. The idea behind the 15 ft. 6 in. spar was that it would stow on a short van and the boats in consequence be quite cheap to transport by rail; but the joint itself cost some £2 to make, and £100 worth of bamboo poles were sent down by rail from London to Cowes for a very small sum. It was many years before I could convince the Y.R.A. that their rule, which was made for economy, was actually an expense.

So sure was I that *Avenger* was much faster than any other dinghy, that for the first twenty races I used an old gunter lugged mainsail which, as can be imagined, did not fit a Bermudian mast at all well, and in spite of this sail won these twenty races fairly easily.

Three of us then sailed her across to Havre, and won our race against the best French 14 footers, and then sailed her 100 miles back again to Cowes. Arrived home after a hard crossing, the wind fell away as the day grew, and we raced at Ryde, where we suffered our first defeat, for we were only third, Tom Thornycroft and A. C. Walker beating us. That race showed us that you have to be more alert, with a brain more active, on light fluky days than in a hard breeze of wind. It had taken us 37 hours to sail back from Havre, and after two nights in the open sea in a 14 footer, we could not be expected to be wide enough awake to take advantage of every flaw and change in the light wind blowing.

As the time drew towards the important races of the year, the Prince of Wales' Cup race, which was the championship of the open sea, and the team race for the Trent Inland Waters Cup, I wished to give *Avenger* what I considered the perfect mainsail, that was one in which there was far more flow than usual, for I felt that these dinghies travelling at their low speed needed a sail with this extra flow. The mainsail was made, but as the *Avenger* was winning her races so easily I decided to leave well alone and not to use it until we were pressed or defeated. So it was not until late into the season, after the important races had been sailed, that we used the new sail; and as Tom Thornycroft and I were the two rivals throughout this exciting summer's racing, we did not say a word to Tom about it, but raced with it without his knowing of the change. *Avenger* went faster than ever before, so much so that when Tom came ashore he said, 'I really cannot understand what made my boat go so much slower than yours to-day'; and then we showed him our sail, which explained it, and so ended *Avenger's* year.

She had taught me that practically everything that is near perfection in this world is the result of many years of thought and study, and then many years of development. We see every year improvements made in the motor cars on the road and the trains on our railways, in houses, and all things made by man on this earth are not the work of any one man, but the work of all those who have gone before, for they it is who have developed ideas and materials, and we who design and build to-day only add our little mite to all the work done by our predecessors.

4. COWES TO HAVRE IN *AVENGER*

Avenger had won twenty races right off the reel in the Solent; the racing had turned to foxhunting, and the sweepstakes from different boats to the number of minutes and seconds by which *Avenger* would win.

It was not yet time to go to Lowestoft and the Broads for the Prince of Wales' and the Trent Cups, so we thought we would have a dart at the French.

We had planned to race *Avenger* at Havre and Deauville to see if she were able to beat the French boats of her class, but as I had to complete the design of a yacht for a South African, it looked as though we would miss Havre.

Then a friend arrived from Havre the Monday of their regatta, and said there would be no dinghy race at Deauville and only four at Havre, that day being the first race, the others the following three days.

So we filled *Avenger* with 3 cwt. of food, water, clothes, compass, lamps, charts and gear, and left Kingston at 4.30 p.m. We were half an hour clearing the river, and once we had left its shelter we picked up a south-west wind, so strong that the 15 miles from Castle Point to Bembridge Ledge were sailed in 1½ hours, as we arrived there at 6.30 p.m.

This speed I should have thought impossible considering the weight of food, gear and three men that formed *Avenger's* crew.

We knew we could not stand full sail in the wind and sea clear of the shelter of the Island, so while still in the lee of Bembridge Ledge we reefed the mainsail, so that its head came below the jib halyards, and then let her go across for Havre close hauled on the starboard tack.

Once clear of the Island, we shipped water faster than two could bail it out on this course, so I let her off a point to leeward of Havre, this easing the wind and sea enough to enable one man bailing to keep pace with the water shipped, while the other two sat her up.

About 4 miles outside the Wight we saw a cutter with three reefs in her mainsail running back for the shelter of the Island. She had only just put to sea bound for Havre, where she finally arrived two days after us, her crew explaining that the day upon which they sailed was too rough for her. (Yet she looked wholesome and was a 50-tonner.) By midnight the wind and sea had eased enough to allow us to shake out our reefs and carry full sail, and soon after, the wind easing still more, we gave *Avenger* her large light reaching jib. It was necessary to keep her hard at it even if it did mean shifting sails at night, for with the weight of wind in which we started we hoped to sail the 100 miles from Cowes to Havre at an average of 6 knots, so arriving in time for the second day's race.

Dawn found us gliding along quietly and sweetly over gentle hills and valleys, and although this was very enjoyable after the strong wind and rough sea we had started in, it meant that we could not arrive in Havre in time for that day's race.

At 9.00 a.m. the sun burnt up this light air, and we lay becalmed in the swell left over from the hard breeze until late in the afternoon, when a light air made, and once more we moved o'er the face of the waters.

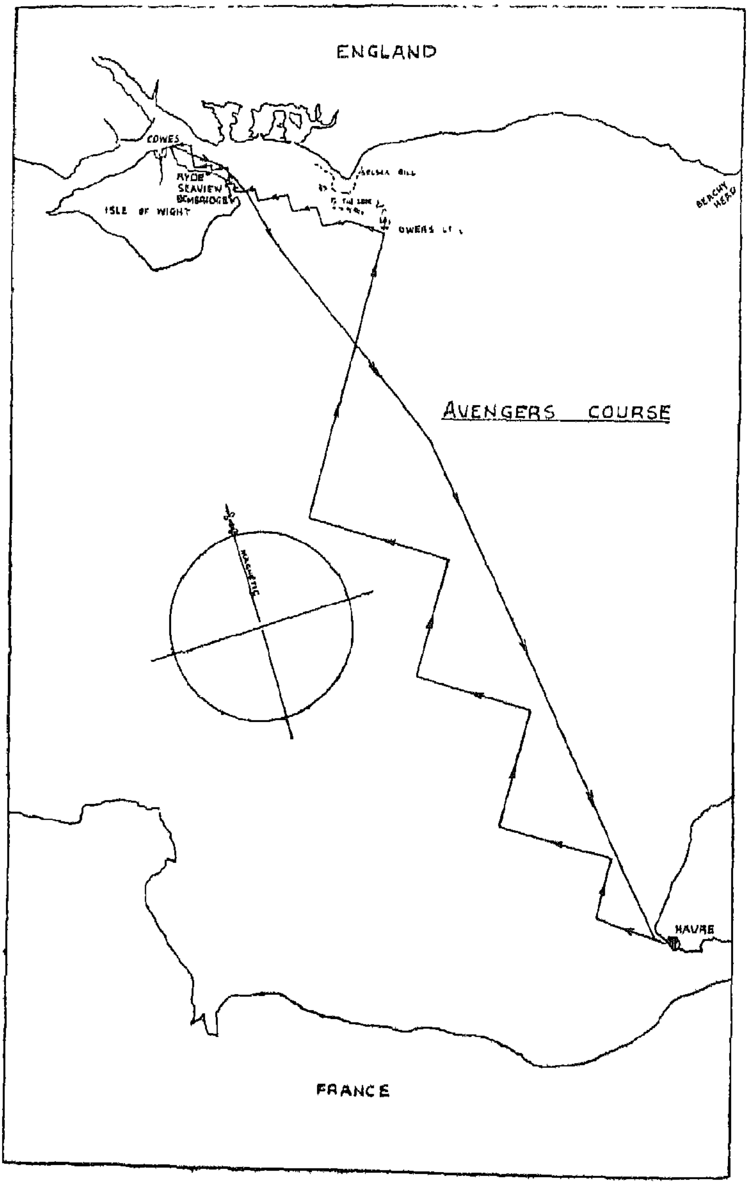
The high land of Cap de la Heve showed over the skyline at 6.00 p.m., so we washed and shaved, then dressed in our best collars and ties, so that we should look smart when we arrived, and 10.00 p.m. found us dining and wining ashore, in Havre.

The next morning we raced and won, as we did again the day after, for the Havre course is in the shadow of la Heve where there are no tricks in the tide.

Thursday night I attended the dinner of the Société des Regattes du Havre, feeling rather like our Royal National Lifeboat Institution, for like it, I was supported by voluntary contributions, wearing (not having taken a dinner jacket) Commander Eldred's trouser's, a French yachtsman's dinner jacket, another's shoes, but my own handkerchief.

The day after our last race was a Friday, and, moreover, the thirteenth, so, of course, we stayed till Saturday afternoon, when we left with the wind dead ahead and the weather report Jolie Brise Nord Ouest. As this meant a beat dead to windward of 100 miles, we stood on each tack for four hours.

(As a boy in the choir, instead of paying attention to sermons, I would wander miles on the wings of thought,


ENGLAND
COWES
RYDE
SEAVIEW
BEMBRIDGE
ISLE OF WIGHT
SELSEA BILL
OWERS LT.
BEACHY HEAD
AVENGERS COURSE
MAGNETIC
HAVRE
FRANCE

and in one of these wanderings suddenly come face to face with the fact, that people fear Fridays because of the first Good Friday, and thirteen because that was the number at the Last Supper.)

The brise was jolie Saturday, through that night, and Sunday until the afternoon, when it freshened to a hard wind, but still remained north-west and dead ahead. The three of us laid out to windward and letting *Avenger* take all that came fairly smoked along, for as yet there was no sea to stop her. The sea did not make up until four hours later, just before dark, when we had to reef, as she shipped so much heavy water.

During those four hours of hard driving with the three of us laying right out, my brain was at work on the strength of our shrouds, counting 85 per cent. of this, as splicing takes away 15 per cent. of a wire's strength. Against this I put the weight required to depress the lee gunwale as it was, the weight exerted by the dropkeel in its efforts to keep the boat plumb, and the weight of three men intensified through their leverage, for we were completely out of the dinghy, excepting for our legs below the knees.

As the strength of the wire and the strain upon it were equal, it was even betting that the shroud would part and our mast carry away, but as a faint heart never won a fat woman we let *Avenger* stand it, till the sea made up enough to force us into reefing.

Just before dark we lifted the Island on our weather bow, and continuing on our port tack, later saw the *Owers* flashing out dead ahead.

We stood on until close to the lightship and then came about. By this time a very heavy sea was running for such a small boat as *Avenger*, and through my not easing her over a very steep sea, she shipped it solid and was almost swamped. The hurricane lamp was put out of action, the electric lamp was washed off the thwart into the bilge, and everything was soaked, so that it was impossible to strike a match, or make a light of any sort. As we were right in the steamer track with no light, I put *Avenger* about again and hoped to be able to thread her through the passage between the shoals inside the *Owers*, and then work along close up to and in the lee of the land in smooth water, and out of the steamer track.

But after a while I missed the passage, which is difficult to find even in daylight, and is almost unknown, and we found huge breaking seas on either hand and dead ahead, so we put about and threaded our way back into deep water, spending the night evading steamers, as well as fighting to windward in steep breaking seas.

As we tacked close inshore of Bembridge, the light of early dawn gleaming upon the white ruin of St. Helen's old church reminded me of the way the stones with which sailors scrubbed their decks received the name of Holy Stones.

St. Helen's Roads giving such good shelter from south-westerly winds and being so close to Portsmouth was a favourite anchorage for our old sailing Navy, and as tombstones were excellent for deck scrubbing, St. Helen's old churchyard was plundered, and so the stones became known as Holy Stones.

We beat on past Bembridge to Seaview Pier where we made fast and went ashore for breakfast. Monday is washing day on the Island, and good housewives rise very early to do their washing as well as their day's work, so we went to a house where the smoke was already rising from the chimneys, and asked if we could have breakfast. While this was being cooked, we all three fell asleep on the lawn, which was wet with dew, but as we were wet through, we did not mind this.

Bob and Spike had been bailing all night, and I had been steering for 17 hours, so we were extremely tired, and even *Avenger* had felt the strain, for she had altered shape forward, and ever after was faster in wind and sea.

After breakfast we sailed to Ryde, but our race was not until the afternoon, by which time the wind had died, leaving but the faintest of airs, in which our tired brains refused to sparkle, so we finished third to Tom Thornycroft and A. C. Walker.

Then away for Cowes where the Customs allowed us to keep the three small bottles of scent, as we had opened them, and explained that they were for our own adornment.

Avenger had taken 29 hours to sail to Havre, and 37 hours to beat back. Bob and Spike have bronze medals, whilst I have a silver one and a cup to remind us of *Avenger's* greatness, all of which she won at Havre.

5. *DARING*

Next came another International 14 footer, *Daring*. Whereas in *Avenger* I had established the fact that a dinghy designed to plane was almost invincible whether at sea or on inland waters in a hard or light wind, I wondered if one with even more planing ability, which meant some sacrifice to windward, would not prove to be faster. *Daring*, therefore, was given a wider transom, and so had a flatter and wider run aft.

Daring's year was a sad one for me, for in that year my mother died, and for some months I was without my usual energy. *Daring* did not race at all until the season was well on, and she only took part in some dozen or more races, but as these were the most important of the year we were able to judge her ability.

Besides the alterations in her hull, I designed her with a rudder that shipped out through her bottom, to try and save the air sucked down whenever the rudder was put across the boat; but this rudder was so close to the centre of the boat, and so fierce, that it almost rolled her over every time I used it, even though it was smaller and I only giving the slightest touch on the helm. So it was discarded, and we once more went back to the rudder hung on the stern.

The Prince of Wales' Cup was at Plymouth, and was held in a very hard sou'-westerly wind, so hard that only 13 out of the 37 starters completed the course, the rest having filled or carried away gear on the way round.

Previous races had shown that on such a course there was no dinghy to equal *Daring*, for though we had a beat to windward we also had three reaches, and no dinghy yet built could plane like *Daring* on a reach in such a strong wind. But I was very worried about the start, for it was to be practically a dead run with less than a quarter of a mile to the first mark, which meant that the whole fleet of 37 dinghies would arrive at that mark in a bunch, and a boat hemmed in might foul another and have to retire, or she might have some of her gear carried away by other boats' spars. I lay awake worrying this point over before the race, and could not sleep until I had decided either to be clear ahead or astern of the whole fleet round the first mark. I started at the extreme lee end of the line, though this was wrong with the wind so far aft, as a dinghy could never hope to break through the entire fleet from the lee position with the wind abaft the beam, for though she would be sailing harder on the wind and travelling faster, this would be cancelled out by the fact that the boats to windward would take away her breeze directly she reached out far enough ahead for them to do so.

We arrived at the first mark about sixth boat, with a crowd to windward. *Daring* was therefore hove to until the fleet had sailed round, and rounding last I tacked her to port at once, as this meant I could make a good port tack without fear of being caught by another boat on the starboard. After this we came about and stood for the outer mark on the starboard tack, and quite soon James Beale, in the second boat round the buoy, had to go under our stern as he was port tack, and this meant there was only one ahead of us, Tom Thornycroft, the first to round the mark. Travelling fast though close hauled, *Daring* was soon ahead with a minute lead at the end of the one beat to windward, so that though her windward qualities had been sacrificed to make her plane better than *Avenger*, she was still good enough to pass the whole fleet of 35 dinghies on a beat to windward providing the wind was hard enough. From this point onward *Daring* started to plane away and leave the rest of the fleet, and I have yet to plane in a 14 footer faster than we planed in *Daring*.

But though she won the Prince of Wales' Cup race, the Lowestoft 50 Guinea Cup and, with Tom Thornycroft as a team mate, the Trent Inland Waters Challenge Cup, I felt that, generally speaking, the sacrifice in weatherliness was too much for what we gained in planing ability; for *Daring* often finished second in light and moderate winds, whereas *Avenger* would have finished first, and she brought home to me the fact that for racing one really needs a vessel that is fast under all conditions of wind and sea, and that speed in hard weather can be bought by too great a sacrifice.

Chapter V

TO SWEDEN AND BACK IN A THREE TONNER

VIGILANT

25 ft. 6 in. on the waterline, a beam of 6 ft. 4 in. and long overhangs tell of a long and easily driven boat, and as she only weighed two tons complete, her small sail area of 236 sq. ft. in a Bermudian cutter rig was enough to drive Vigilant *along in even the lightest of airs, while the small area was a great blessing in the hard weather we encountered.*

Over in the Baltic a racing craft had been developed under the Skerry Cruiser rules, far different to anything we had in this country, for it was a long easily driven hull with light displacement and a small amount of lead keel, driven by a small sail area, and was a type of craft halfway between the light raters of 1900 and the extremely heavy racing hulls produced by the International Six-metre rules. My next craft was *Vigilant*, a Skerry Cruiser, which I designed and built to the 22 sq. metre class.

The rules of this class were most interesting, as the sail area was limited in height and area, while the hull could be made as long as one fancied providing that for every increase in length over a certain amount the beam at various points, the length of keel and displacement were increased in proportion to the increase in length.

The rule had been built to for many years, and the boats, as would be expected, had been getting longer and longer. I decided, after designing several boats to the rule, to build one as long on the waterline as the 30 sq. metres; so *Vigilant*, though to the 22 sq. metre class rule, was as long on the waterline and as beamy as the 30 sq. metre hull of that time.

The reason behind her design and build was that that year, 1930, was the hundredth birthday of the Royal Swedish Yacht Club at Stockholm, the home of so many famous Skerry Cruisers, and the Regatta in connection with this would give me a fine excuse for sailing *Vigilant* up Channel, across the North Sea and through the Baltic to Stockholm. A crew of three seemed an ideal number for this cruise, and so Dr. Cooke, Bob Dickerson and myself formed *Vigilant's* crew. We had a most interesting cruise, and *Vigilant's* astonishing ability in heavy weather and big seas made us realise how little we knew of the ease, ability and speed of long, easily driven hulls in stormy waters.

With her light displacement and long clean run *Vigilant* could chase away before a gale without being pooped, for she did not disturb the following seas at all, as she left the water so cleanly astern. Moreover, when being driven to windward, whether in the Channel, the North Sea, or the Baltic, all of which as is known have different characteristics, her light hull, having a great deal of reserve buoyancy in the overhangs fore and aft, which also increased her fore and aft stability in rough water, had only to lift a light lead keel up over each wave. So *Vigilant* proved herself to be very buoyant and dry and as graceful as an ocean bird whether on or off the wind in bad weather, and while many thought her cruise rash and dangerous, we on board knew that in *Vigilant* we had not only a modern racing type, but also a hull and rig that, if sailed with understanding, was far better than the short and beamier cruiser held by so many to be safe and ideal for heavy weather.

We only arrived in Stockholm in time for the last four races of the Regatta, and with a fleet of thirty starters we never finished better than fourth, as *Vigilant* was untried and had been given a low fore triangle (to make for safety at sea) and was not hauled out or painted. As can easily be imagined, she excelled in hard weather.

Two of us, Bob and I, sailed her back from Sweden, for the Doctor had to fly home to care for his patients, though there should have been no sickness in the summer months. On the way back we beat to windward from Cuxhaven to Lowestoft in a gale during which a steamer passed us with her starboard bridge swept away and her starboard lifeboat smashed and upside down in its davits.

Practically every small sailing vessel with outside ballast and a deck is able to stand far more hard driving than her crew of human beings, and this fact, among others, accounts for so many different types being held up as ideal for cruising, where gales have to be weathered at sea. If man were able to stand more than small ships, in the way of hard weather, we should soon arrive at the ideal sailing vessel, and cruisers would all be alike just as the international racing class boats are.

The cruise described in the following pages was made by a boat of the type that is generally looked upon as being quite unsuited to the open sea. She is Bermudian rigged, with a mast longer than her hull, the halyards and luff rope of the mainsail run up inside this hollow spar, while her displacement to length is so light that the 'Q' class, which races on the Solent, refuses to let her compete. Compared to the international 6-metre yacht, she is of about the same size, with half the sail area and half the displacement. Without holding this extreme type of racing boat up as ideal for deep water work, I should like to point out that *Vigilant* made her cruise to Sweden and back to Cowes in a summer noted for its strong winds, and five different times encountered wind of gale force—registered ashore, not by her crew.

While chasing away before three of these gales, she seemed to tear along at twice her natural speed, which suggests that her press of sail was three times as much as she should carry

Vigilant did not suffer at all through this harsh treatment, except that the paint came off her seams under water near her entrance, which would have happened to any new vessel, and is the reason for not coppering a new ship until she is a year or so old, and settled down in life.

Vigilant was launched, had two spins to air her new sails, and was then loaded up with food, spare sails and other gear for her cruise to Sweden, leaving Cowes at 6.30 p.m. on Monday, June 30.

We were a crew of three. Dr. R. T. Cooke, who is the owner of the 5-tonner *Enid*, and is grandson of the famous E. W. Cooke, R.A., Bob Dickerson, one of my old sea scouts now grown up to a man-sized engineer, and myself, owner.

The weather report looked as though we were in for a dead beat in a jump, as it stated 'wind 30 miles an hour S.E.,' but as we beat through the Spithead forts, heavy rain squalls from all directions, with violent thunder and lightning, knocked the wind down to faint airs from all points of the compass. With hardly a breath of wind we sailed up Channel past the *Owers*, *Royal Sovereign* and *South Goodwin Light Vessel*, taking three days to do what we could have done in one with a decent breeze, and at 9.45 p.m. July 2, with the *North Goodwin Light Vessel* close abeam, we set our course for the *Terschelling Light Vessel*, 180 miles away N.E. ¾E. On July 3, at 6.00 p.m. Latitude 52.06, Longitude 2.50 E., we were passed by the *Bremen* close to leeward, which showed we were right on our course.

The *Bremen* seemed to have some purpose in life, as she roared by with her wave high up her stern, and another right over her propellers. Her model spent six months in the testing tank at Hamburg, and the reason for the bulge in her stem below water is to bring the crests of the waves along her side half a wave forward, so that one is right over her propellers. This form of forefoot has no greater resistance than the ordinary entrance, but in the *Bremen's* case has the advantage of increasing propeller efficiency. For although it is obvious that on a paddle steamer the paddles must work in the crest of one of the waves she makes along her side, it is not quite so evident that a propeller, to do its best work, should be under the crest of one of these waves. A paddle wheel would be seen spinning round in thin air if in the valley of the wave, while a propeller slipping just under the surface would be unnoticed.

That night dinner consisted of gin and vermouth, soup, mackerel (just caught), beef, spaghetti, fruit, cider and port; we usually fed well.

A day from the log will illustrate our lazy life, not fully, as we swam several times a day when there was little wind, and generally amused ourselves.

'July 4. 3.45 a.m. Sunrise, although yellow, has the appearance of forecasting a nasty day. Not an air of wind since midnight, and the boom has slammed about, as the lop from the old wind is only just settling down. Noon. Still without a breath of wind, no sights to-day, as clouds blot out sun. Day's run, noon to noon, 60 miles, all done in 10 hours yesterday. Set up all standing rigging this morning; although *Vigilant* is a racer she has lanyards of Russian Hemp instead of the usual rigging screws, as I have old-fashioned ideas on the subject. Racing people have admired the way the halyards and luff rope of the mainsail work inside *Vigilant's* mast, which is stream-lined for efficiency to windward, and then have been startled to find it supported by Russian lanyards. 1.00 p.m. Faint air, N.E., steering N. on starboard tack, speed 1 kn. 2.00 p.m. Rain squall kills wind, all hands go below; quite cosy in cabin, doctor snoring peacefully. 4.00 p.m. Felt something about to happen, so went on deck; only there two minutes, when a sudden squall of wind and rain came from the N., and away went *Vigilant* N.E. at 5 kn., close hauled on the port tack.

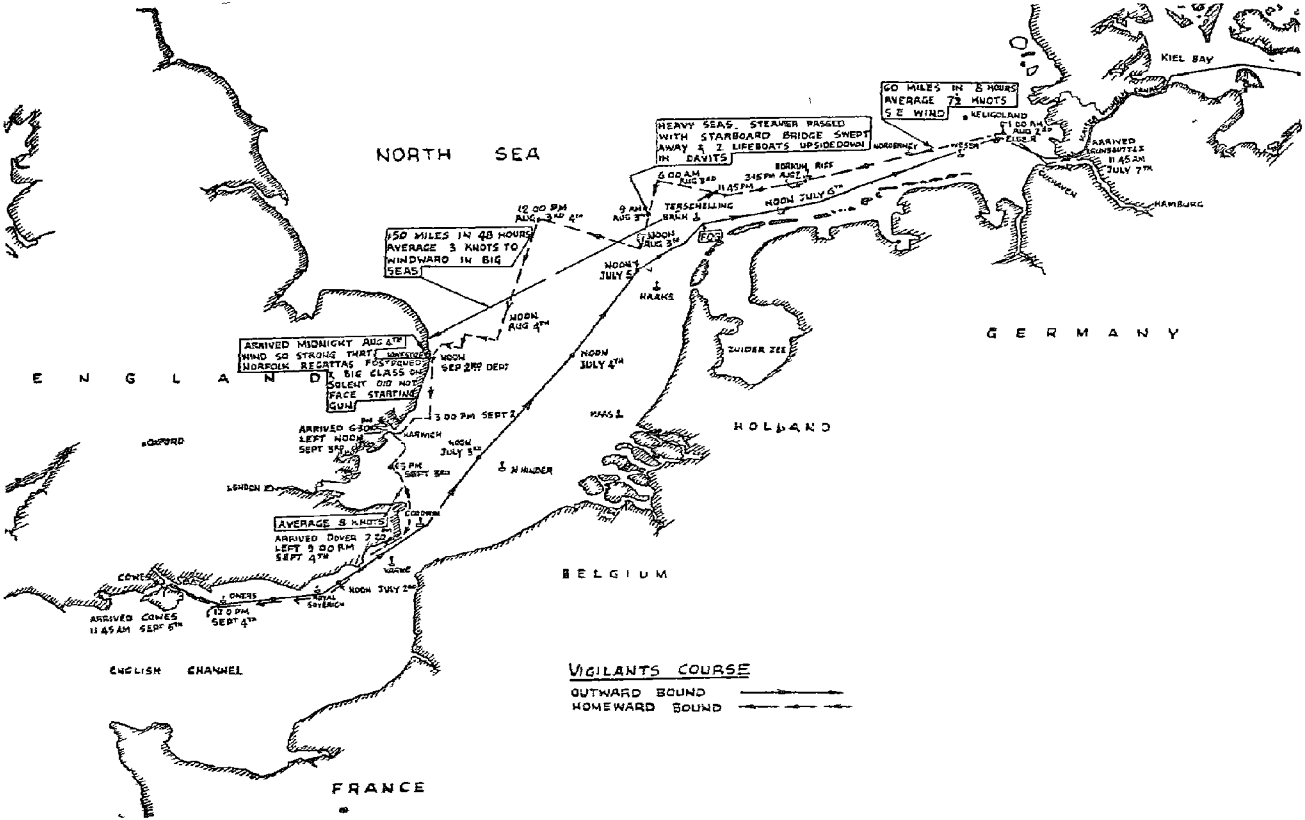
'It is dark, the sea is smooth, as the rain is heavy enough to prevent even this weight of wind from making a ripple, everything quiet and unnatural, and a feeling in the air that something is coming.

'4.30 p.m. Very heavy squall, and I can only see 100 yards. 5.00 p.m. Squall eases, we have never reefed, so have a dress rehearsal, rolling down two reefs, and then shaking them out, all is well. 6.00 p.m. Wind strong, and *Vigilant* is sailing fast for so small a vessel on a wind; we are doing 6 knots in a N.E. direction generally, the wind shifting from N. to N.E., so we tack often, to keep on the course nearest to N.E.

'6.40 p.m. Wind eased, doing 1 knot. 7.10 p.m. Wind shifts again, and freshens. Doing 5 knots, N.E. ½E. Since 4.00 p.m. we have done 15 miles N.N.E., and sailing as we are, we should sight the *Haaks Light Vessel* in four hours, but visibility bad, so do not suppose we shall pick it up this side of midnight. 12.45 Midnight. *Haaks Light Vessel* bearing E.S.E., light just above skyline, so about 10 miles off.'

We had had a fresh wind from 6.00 p.m. till midnight, when it eased away, and then we were becalmed from 4.00 a.m. till noon, when a faint air came, which gave us a speed of 1 knot. *Vigilant* impressed us well with the way she walked along on a wind, and seemed very manly indeed when the sea made up after an hour or two of a fresh wind. At 4.30 p.m. on July 5 we sighted the light tower on the N. end of Texel Island, when the faint air that had carried us since noon left us, and we were becalmed till 9.30 p.m. when another enabled us to work our way towards the *Terschelling Light Vessel.*

July 6. I woke to find Bob steering with a light N. breeze with a thick fog. We sounded and found 16 fathoms, dead low water.


NORTH SEA
ENGLAND
GERMANY
HOLLAND
BELGIUM
FRANCE
ENGLISH CHANNEL
KIEL BAY
KAISER CANAL
HELIGOLAND
1 00 AM AUG 2ND
ELBE R
ARRIVED BRUNSBUTTEL 11 45 AM JULY 7TH
CUXHAVEN
HAMBURG
WESER
NORDERNEY
60 MILES IN 8 HOURS AVERAGE 7½ KNOTS S E WIND
HEAVY SEAS. STEAMER PASSED WITH STARBOARD BRIDGE SWEPT AWAY & 2 LIFEBOATS UPSIDE DOWN IN DAVITS
BORKUM RIFF
3 15 PM AUG 2
11 45 PM
6 00 AM AUG 3RD
NOON JULY 6TH
TERSCHELLING BANK
9 AM AUG 3RD
NOON AUG 3RD
FOG
12 00 PM AUG 3RD 4TH
150 MILES IN 48 HOURS AVERAGE 3 KNOTS TO WINDWARD IN BIG SEAS
NOON JULY 5
HAAKS
ZUIDER ZEE
NOON AUG 4TH
ARRIVED MIDNIGHT AUG 4TH WIND SO STRONG THAT NORFOLK REGATTAS POSTPONED & BIG CLASS ON SOLENT DID NOT FACE STARTING GUN
LOWESTOFT
NOON SEP 2ND DEPT
NOON JULY 4TH
3 00 PM SEPT 2
MAAS
ARRIVED 6 30 PM LEFT NOON SEPT 3RD
HARWICH
NOON JULY 3RD
4 45 PM SEPT 3RD
N HINDER
OXFORD
LONDON
GOODWIN
AVERAGE 8 KNOTS
ARRIVED DOVER 7 30 PM LEFT 9 00 PM SEPT 4TH
VARNE
NOON JULY 2ND
ROYAL SOVEREIGN
OWERS
12 0 PM SEPT 4TH
COWES
ARRIVED COWES 11 45 AM SEPT 5TH
VIGILANTS COURSE
OUTWARD BOUND
HOMEWARD BOUND

The tide was running N.N.E. so we steered E. to get inside steamers. This fog meant two on deck, and we sounded every fifteen minutes, getting 16 to 18 fathoms. At 3.00 a.m. we sighted the light tower on Terschelling island bearing E.S.E., but dared not approach closer than 3 miles to the land, as shoals run out that distance. A night at sea with fog means extra work, and as so many ships pick up the *Terschelling Light Vessel* and pass outside it, we went inside, where we might have run ashore. This would not have mattered with the light wind we then had, but often a fog is the precursor of a gale in which a ship would break up if unfortunate enough to be ashore. The fog, after lifting a few minutes for us to fix our position, shut down again, and we sailed on parallel to the coast, sometimes at 5 knots and sometimes at 2 knots as the wind was patchy. The rising sun burnt up the fog and the wind too, and we slowly sailed past the Frisian islands at an average of 2 knots. At 9.00 p.m. we were off Borkum with a light wind N.W. that was freshening fast, which looked as though the breeze foretold by the fog would be a N.W. one, a bad wind for this coast, but a fair one for us to the entrance to the Kiel canal. At midnight we were off the island of Juist, the breeze getting stronger and looking like a gale before daylight.

July 7, 7.15 a.m., we left the outer *Elbe Light Vessel* to port, having averaged 7 knots since midnight, which is good going for so small a boat. She did this without any effort, as although the seas were steep, both Bob and the Doctor had slept since I took over at 1.00 a.m.

Vigilant fairly smoked up the Elbe, doing the 36 miles from just outside the outer *Elbe Light Vessel* to

Brunsbuttelkoog in 4½ hours, exactly 8 knots. We gybed twice, because of the bends in the river, the first time off *Elbe* 4 *Light Vessel* in quite a sea, as the wind was right in, and we were not up to any land yet, although we had sailed 17 miles from the outer *Elbe* in less than 2 hours.

Gybing in wind of that strength appears asking for trouble, so I had better explain how we did it. It must be remembered that our rig was Bermudian, and that there was no heavy gaff aloft; our boom was short and hollow, so it settled down to simply getting the sail across, not so bad. We did not touch the sheet, simply put the helm up hard, with the boom right off; the wind had to be almost on the beam before the mainsail would blow across, and then it flipped over with a rush, but the wind being abeam, or even forward of the beam, the sail was aback when across, with no wind in it at all; then we bore away and tore off on the new gybe. We reached Brunsbuttelskoog at 11.45 a.m. and were stowed at noon, waiting to enter the canal.

It cost about £2 to go through, I forget the exact amount. In the lock they said that we must tow through, but the Lord was good, and Lauriston Lewis, who was locking through, also bound to Sandhamn with his 12-metre, which was afterwards rammed by *Lulworth* and sank off Cowes, kindly said that he would tow *Vigilant* as well as his racer. As we were first to sail out of the lock (showing papers, Customs and locking through took an hour and a half) we thought we might as well sail on, as we had a fair wind, so we did, and were quite delighted to observe that our speed by the kilometres marked along the bank was 10 miles an hour. We tore along for 17 miles, then the canal took a turn to windward, so that we could not lay the course, and the *Marjery*, towing *Lucilla*, caught us; we had a good 100 yards start at the lock, as we were smaller and easier to get under way.

They took us in tow and we went through alongside the 12-metre. It was fine going when the wind came ahead. As we locked through at Holtenau, they told us it was blowing a N.W. gale, and it would continue, so that it would be best for us to stay a day or two in Kiel. We sailed clear of the lock, and tied up to Bellevue Bruick for our stay. We carried no dinghy, and always reckoned to tie up, as when in harbour I like to feel I am ashore.

For July 8 and 9, the weather report was N.W. gale and sea rough; so we stayed moored to our pier, very comfortable. When entering strange harbours, I usually sail round leisurely first, looking for the best berth, and then have only to moor once.

July 10. The weather report still talked of gales from the N.W. but was more cheerful, so we decided to have a shot at it, and left our cosy pier at 8.15 p.m. To *Kiel Light Vessel* we were on a wind, but in the shelter of the fjord Bob and the doctor made supper, in spite of the fact that we were almost on our beam ends in the puffs. We fed before clearing the land, having taken 1¼ hours to sail close hauled the 8 miles down the Kiel fjord. We passed close to the *Kiel Light Vessel* at 9.30 p.m. seas going clean over us, not spray, but solid water, as we were on a wind and sailing fast.

At the lightship we bore away on our course for the *Fehmarnbelt Light Vessel*. This was East and brought the wind on our port quarter. We flew along now, planing, with the sea thrown high each side of our bow, then the mad rush would be checked as we climbed up the back of a wave, and quite often we would be swept by heavy seas, a glorious ride. A gale is exhilarating until it tires a man out, and this was really fine, rushing headlong while we were planing, and then losing speed and coming down to normal as a huge sea swept our boat. Then *Vigilant* would recover her breath and strength, and away we would go again. After two hours of this, my arm ached so that I could not hold *Vigilant* properly, so Bob came alongside me and put his weight on the tiller at the times when she wanted treating roughly. So we rushed on until off the N.W. point of Femern, where our jib sheet parted; we put her in the wind, took in the jib, reefed the mainsail, so that the head of the sail was half-way between the hounds and the deck, and rove off another jib sheet, then carried on on our course. We had done 27 miles in 3 hours; Dixon Kemp at one time said the speed of vessels was the square root of L.W.L., but after the *Sappho* sailed her record-making passage across the Atlantic he increased it to the square root of the L.W.L. × 1.45, and Froude and his tank tests rather proved this; so our speed, according to theory, should have been only 7¼ knots, but because of overhangs we had attained 9 KNOTS.

It always amuses me to hear overhangs regarded (as they always are) as useless and dangerous in a seaway, for then is the only time they are of value, increasing the effective water-line length and fore-and-aft stability. The only time they are a nuisance is in a calm immediately following a blow, for then there is an old sea left over and the counter banging down on this shakes the boat from end to end. This is easily cured by giving the counter a sharper 'V' section. But then under those conditions any vessel is very uncomfortable and miserable, helpless, and flung about in all directions. Thank heaven those conditions are seldom met, and when they are, they are not long lasting.

We now squared away more for the Geydser shoal, and averaged 6 knots for the next 30 miles, with only 14 sq. ft. of main sail showing, the rest being rolled up; this will show the weight in the wind. Rounding the Geydser Reef we made for Hesnaes, a small harbour, 18 miles to windward. Although our small sail was all right running, we needed more than we could safely carry to drive us to windward, so we made sail, and with our mainsail a foot below the hounds and jib, we had 100 sq. ft. showing, and at times were buried to the top of our coach roof. We made good time and averaged 4 knots to windward, the best we ever did, but it was not quite a true beat, more of a long and short leg.

We arrived at Hesnaes at 11.00 a.m. July 10, a pretty harbour, and stayed almost 24 hours, leaving at 10.00 a.m. With full sail, we averaged 6 knots till 6.30 p.m., when the wind, which had been easing down all day, only gave us about 5 knots. Measuring the height of the sea as best I could with angles, it appeared to be 20 ft. from crest to valley. By midnight we were becalmed 10 miles due S. of Sandhammaren Point, having sailed almost 80 miles in 13½ hours, and so ended a N.W. gale, which started while off Borkum; if we'd only been as manly as the boat we should have been in Stockholm, but being weak, we wasted this wind by going into two harbours.

From midnight till noon the next day July 12 we had only sailed 10 miles, and by 5.30 p.m. were only another 5 miles on our way. However this was a fine day, spent swimming, varnishing deck, etc. At 7.30 p.m. with a fair wind, we had sailed 12 miles in 2 hours, the wind being just strong enough to make little white caps all round.

This was pretty going, with Bob and the doctor cooking the dinner, and all was peace within. At 8.30 p.m. the wind had gone abeam, so we took in the spinnaker as the wind was now W.N.W. instead of S.W. Next morning at 3.30 a.m. we were abreast Ut Klippan (meaning Uttermost Point) practically becalmed. Everything seemed very dismal, low heavy clouds were coming from the N.E., rocky islands and rocks were all around, altogether a dismal place with the appearance of a gale coming again. The wind soon shifted from the light air, W.N.W. to N.E., with rain, but after two hours the rain cleared, and it blew hard out of a clear sky with a steep sea. A German yacht of about 20 tons came up from astern soon after rounding Ut Klippan, and as it was blowing about 25 miles an hour she passed us beating to windward, both of us being Bermudian cutters and carrying full sail.

As she passed, she hoisted her ensign, and we hoisted ours in reply, hoping that the wind would either decrease or increase, for in that smart breeze she was definitely faster. Later in the day the wind did increase, so I was routed out of my warm bunk to give battle to the enemy, now two miles or more ahead and dead to windward. We eased our main sheet away instead of reefing, and started in on the job of beating the larger vessel.

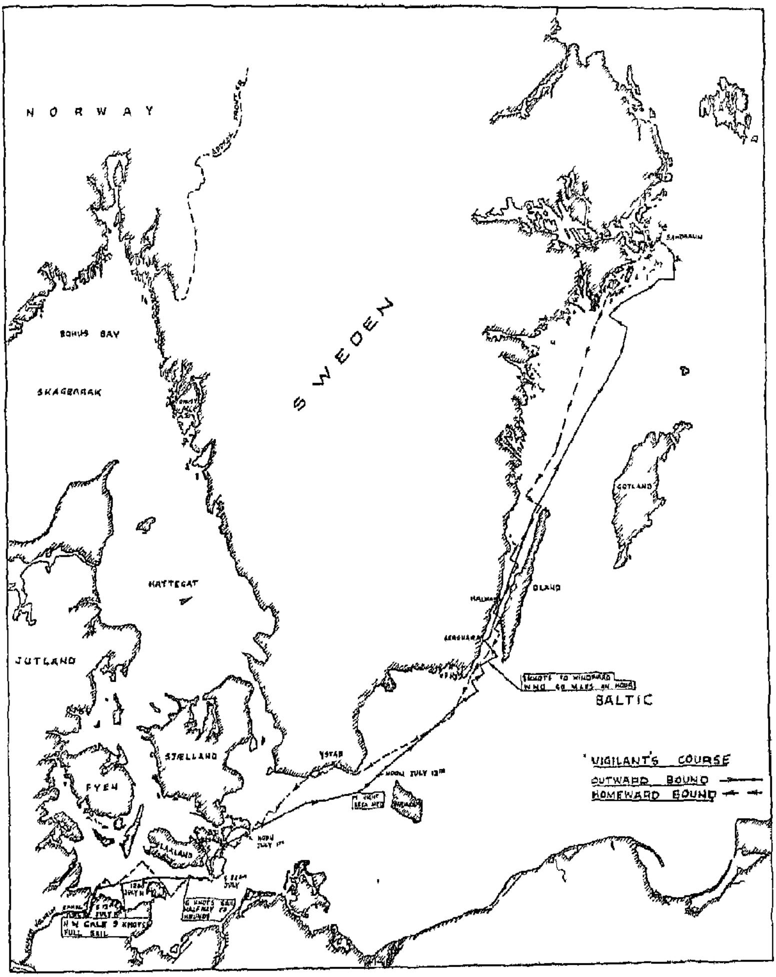
By now it was blowing 35 miles an hour, and the sea was very steep and breaking, and taking a small vessel like *Vigilant* to windward in it was a real pleasure. The method I adopted is one which I had learnt in open boats, that is, to sail them on their course in the valleys of the waves, but instead of luffing into the crest bearing away and taking the sea broadside. So manoeuvred, the boat does not lose her way at every sea, neither does she rush into the sea, for the breaking crests slide under or over her broadside with only their own force, the boat being neutral to them. Sailing *Vigilant* in this way to our great joy we soon started to overhaul our enemy, and finally sailed past her, she having three reefs in, and we with full sail. Soon she stowed her mainsail and, turning tail, ran back before it round Ut Klippan to shelter under the land she had just left.

All day we beat to windward with full sail, and at 3.00 p.m. were hove to off the Garpen Lighthouse, making sure of the way into Bergqvara, as if we hit the rocks with this sea it meant Goodbye *Vigilant*. Having satisfied ourselves that the marks agreed with the different compass courses, we sailed in, the course twisting about to clear rocks, submerged and awash, and found ourselves in a pretty natural harbour. We sailed round about looking for the best spot, then shot into a small sort of dock, square, about 50 feet by 50 feet, with an entrance about 18 feet wide, and moored inside. In entering tricky harbours it is as well to have a good look from the outside before going in, unless racing, for even if you jump up and down in a seaway outside for two hours deciding the best way in, it is better than wrecking the ship, and as you have really come for a sail, you should be in no hurry to go into port. We went to a dance that night, and I thoroughly enjoyed polkas, waltzes, two-steps and human music, instead of wails from such untuneful instruments as play in England. Surely the waltz will return before those of us who have learnt waltzing die.

July 14. The Skipper of the salvage tug which had towed in a ship of timber abandoned in yesterday's blow said it was the hardest wind they had had since the winter. The survey people could not work, and yet we had driven *Vigilant* through the steep sea with full sail, doing 30 miles in 9½ hours, which is better than 3 knots dead to windward. At noon we left Bergqvara with a light S.W. wind, and sailed up to Kalmar, which is 19 miles, in 3 hours, just over 6 knots. After walking round the town for 2½ hours we left at 5.30 p.m. for Sandhamn. The wind was very light but fair and by 9.00 p.m. we were becalmed off Skaggenas. Then we were towed by a trader at 3 knots till 2.00 a.m.—5 hours.

July 15. 2.35 a.m. sunrise. Wind east off Runo Rodskar, just south of Oskarhamn, steering N.E. by N. for Almas Grundit off Sandhamn 140 miles away. 6.15 a.m., end of the island of Oland abeam. Noon, Lat. 57.42.09. Long. 17.19.10 E. And by midnight we were another 35 miles on our way.

From the log. 'July 16th. 2.20 a.m. Becalmed, and sun rises clean out of the sea, just as it sank. So light have been able to read all night. 2.45 a.m. Wind N.E., very light. Close hauled, can just steer. N. wind shifted and steering N.E. 5.30 a.m. Sight Lighthouse to the W., which must be Landsort. 8.15 a.m. Tack ship off Soderskar rocks, about 6 miles N.E. of Landsort, and steer close hauled on the port tack parallel to the Islands. Noon. Off Lagland, a small rock. 5.30 p.m. Hufvudskar Lighthouse abeam, doing about 2 knots N.E. by E. for Almas Grundit, 20 miles off. 8.30 p.m. No wind, but *Vigilant* fanning herself along, so as to give us steerage way. Seals around us; they have heads like smooth-coated retrievers and are friendly but shy.'



July 17. 2.20 a.m. Sunrise. Quite light all night, so we could read and *Vigilant* still fanned herself along in the calm. 5.00 a.m. Wind came ahead, steering E. ½ S. 7.00 a.m. Tacked, steering N. by E. for *Alma Grundit Light Vessel*, which is visible. We all washed and shaved and smartened ourselves up as it is much nicer to arrive spick-and-span. 9.00 a.m. till 10.00 a.m. Hundreds and hundreds of racing yachts appeared from out behind rocky islands, so we were right for Sandhamn and the races. We arrived at the Committee boat between two starts, and asked for a programme; they told us to get 'to hell out of it', and threw us a programme, all of which was not easily understood. However, we started off with our class, 30 in a race, and ended up last, the boat next to us being the winner of King Oskar's cup a few days ago. The wind shifted when we were to windward of the fleet and put us to leeward.

We had arrived at Sandhamn in time for the last four days of the European Meeting of all Nations, which began on July 2 and ended July 20. This was remarkably well arranged by the Royal Swedish Yacht Club, to celebrate its hundredth birthday, and consisted of banquets and racing with 500 yachts from all nations both at sea and on the fjords, and showed the value of international building and racing rules.

I wonder how long it will be before the ocean racing rule becomes international with a meeting of say 100 boats in the Solent, from which place they race to Madeira, where they feast and then race back again.

On July 18, the doctor, Bob, and myself had breakfast ashore; rather a sad meal, as the doctor had to return home by aeroplane, because of his job. I imagine that a doctor has a hard life, being called at all hours to perform his duty to mankind, who seldom fully appreciate what is done. The doctor gave us a hand to get under way, and out to sea we went, both Bob and I feeling sad, as we knew that when we returned after the race he would be on his way to England, so that only Bob and I would race *Vigilant* and sail her home.

We raced out at sea with the rest in a flat calm. We were all in one place for 4 hours, so Bob and I cooked and had a decent meal, then shaved and dressed ready for the dinner and dance at the Royal Swedish club house. People were quite surprised to find our evening clothes in good order after such a trip in a small boat. We finished last in the race.

We had a fine breeze for the race on July 19. At the start we were sailing nicely down the line, close hauled on the starboard tack, and just before the gun we had about 18 boats port tack. The rule gave us the right to put them all about, but instead I eased the main and jib sheets, and stopped *Vigilant*, letting them all pass on port tack, and started last. For had we charged them, as we had the right to do, there would have been a dreadful mess as there was a smart breeze blowing.

We had sailed 1,200 miles to be at Sandhamn and the sea had washed us of all petty things such as taking advantage of rules at the expense of so many other racers, so although we had manoeuvred for this advantage we did not take it.

After beating to windward some time we were still a bad last, so we looked at the rest of the fleet. There they were with everything sheeted harder than seemed sensible, and as we had no winches, we had to shoot

Vigilant in the wind, to sheet flat. Then we started to go up through the fleet, but we had wasted half the beat, so only reached fourth place by the time we were at the weather mark. On the run we gained on the boats ahead and those behind, without passing any, then the reach home came and three boats passed us. Then we altered our sheets and started to gain on them, but did not catch any, and finished seventh. Fine dinner and dance that night.

July 20. We raced this day on Kanholms Fjord. When the gun went we were head to wind on the line with no steerage way; disgraceful! So as usual we started last. It was a reach to the first mark, and once we were away we passed boat after boat, rounding the first mark fourth. Then came the run, the rest of the fleet set great reaching sails to leeward, and by putting the spinnaker boom in the ordinary jib and booming it out to windward, they filled this huge jib, and several passed us. We, not knowing how far and where the next mark was, did not set a spinnaker, but we imagined we would beat them going to windward. The Y.R.A. rule bars a contrivance for rigging the jib outside the boat, and we thought the using of the spinnaker boom in the clew of the jib counted as a contrivance, so when one boat passed us I waved our bow in over her cockpit every time it lifted on a sea, which made the crew angry. As we pretended *Vigilant* was taking charge, they sheered off to leeward and dropped two places. On the beat we did not shine and finished eighth, but still there was quite a fleet behind us. This day there was a smart breeze too. That night the prizes were presented after dinner, and I was surprised, but delighted, when they presented me with a handsome cup—not for my racing ability, but for the cruise over, and to remind me of Sandhamn. I do not think there was any weed on *Vigilant's* bottom, although she had been overboard a month; I raced badly, being used to 14-footers, which are quickly about and away. It was not until the last race that I realised that we lost so much time each time we tacked, and I had been tacking far too much, and never in my life have I made a good start. We were up against the finest of helmsmen, and what more could a man desire.

July 21 at 5.30 p.m., we sailed past the Royal Swedish Yacht Club, and dipped our ensign in farewell, a rather sad performance as everyone had been so kind and nice. The wind was very light from the N., and we reached along slowly through the narrow channel to Kanholms Fjord, where we had raced yesterday, as we intended sailing down inside the islands to Landsort. We had hardly started when the wind came west with rain, and we had to turn to windward through pretty islands each side until we came to the Lighthouse on Yxhammarkubb, when our course became S.W. We could lay it with very small islands close aboard to windward, and larger ones beyond, while close to leeward was the island of Runmaro. These islands, we were told, were very pretty, but in this S.W. wind and rain in the twilight they looked dismal, so when we came to Styrsvik, about 2½ miles from the north end of Runmaro, we thought we would go in for the night as it was 9.00 p.m., and hoped the morrow would bring sunshine. We had no chart of this small inlet; but sailing in places like Norway and the West of Scotland had taught me that in such countries if you steered clear of everything you saw you were safe; so we went in and tied up ashore to the rocks, quite snug.

When cruising if you remember that bold high land and hills have deep water right up to the shore, and you can therefore put your boat ashore without touching bottom, and that flat land means shallow water for miles out to sea, you will seldom come to harm. Generally the height of the land is the depth of the water. But there are exceptions.

July 22. Styrsvik. After a night's sleep we woke to find a smart wind from the N. and bright sunshine, had a walk over the island, breakfasted, and left at 7.00 a.m. Doing about 6 knots we sailed the 15 miles to Dalaro in 2¼ hours. We landed here and looked over the town for over an hour, leaving again at 10.30 a.m., passing Landsort, and out to sea at 3.45 p.m. (30 miles in 5¼ hours is almost 6 knots.) At first we made better than 6 knots, our average over the 45 miles being 6 knots good.

It had been delightful sailing, 6 knots being a comfortable speed, unfolding the view, giving us time to enjoy it, then bringing fresh islands along before we tired of the last. My entry in the log will have to explain or I'd take three pages of description. 'Fascinating islands all around, some eight miles long, others simply rocks 3 ft. across, with all sizes between, some covered with grass and firs, others bare rock and trees, some rock and grass and some bare rock, but all with character, some inviting and others forbidding, as were the low rocky ones with the waves sweeping clean over them. A cruiser's paradise. Out at sea we continued to average 6 knots until 6.30 p.m. when the wind died right away, and we were only doing 2 knots.

'July 23. Noon. Becalmed, Lat. 57.45.50, Long. 17.12.10, having sailed along at about 2 knots since about 6.30 p.m. last night.'

Soon a light air made S.E. by S., and we stood inshore on the port tack until we came to the outlying rocks over which the swell surged even on such a fine day. Then we came about and tacked down along these rocks, as they were interesting, and at 7.00 p.m. we were off Blackan Rock, when we tacked and stood across for the north end of the island of Oland, tacking close inshore at Byxelkroken at 9.00 p.m. Midnight we were 3 miles S. of Jungfrun, having made 10 miles to windward in the last three hours.

July 24, at 7.30 a.m., we were at the Island of Skaggenas, having breakfast. We had sailed 28 miles to windward in the 7½ hours since midnight. We beat the other eight miles to Kalma in two hours, and went ashore at 9.30 a.m., leaving again at 1.00 p.m. with the wind just a faint air, dead ahead. All afternoon we had no breeze, so we thought we would spend the night ashore at Morbylanga, but when off there at 5.30 p.m. a breeze came east so we carried on. At 7.00 p.m. we were to the east of Utgrunden, and doing 6 knots with a smart breeze that was rapidly freshening into a gale.

At 9.35 p.m. we passed Stengrun buoy, simply flying along. The wind had shifted from E. to N.E. and howled through the mast and rigging. By 11.10 p.m. we were abreast Ut Klippan light, but as I thought it could not possibly be the light, we carried on out to sea, for I said to Bob, 'It is impossible for this boat to do such a speed, as it is 18 miles from Ystengrund buoy to Ut Klippan.' We held on our course another half-hour, but nothing else showed up, so we brought the wind on the quarter and headed for Sandhammaran Point.

Although there is no tide in the Baltic the wind affects the water, and blowing it into a corner causes it to be above the normal level there, and this then runs back to find its true level, so that at times currents are felt. Such a current must have been under *Vigilant* at this part to enable her to sail almost 12 knots.

July 25. 2.00 a.m. We reefed down until we had 49 sq. ft. in the mainsail, and our full jib 51 sq. ft., making 100 sq. ft. of sail with which we did 6 knots. The sea was running very steep, and as far as we could judge was 30 feet from crest to valley. It was rather fun when *Vigilant* was poised on the top for a moment before she rushed headlong down the face of the wave. At 11.00 a.m. Sandhammaran was abeam, and we decided to have a spell ashore, so headed her up for Ystead. On rounding the point we saw no less than 10 three-masted schooners anchored in the lee of the land, rolling their decks under. We sailed through this fleet, and entered Ystead, mooring up at 1.00 p.m., exactly 24 hours from Kalmar, having sailed 150 miles in that time, most of it reefed to the bone. The reason for reefing was that both our crosstreees had bent double, and this was also our excuse for going into Ystead and wasting a fair breeze.

The next day the shipyard owned by the harbour repaired our crosstrees, and we had a very enjoyable yarn. They had just built the latest Swedish lifeboat, so we talked of weatherliness in small vessels and such things. We left Ystead at 11.00 a.m. with the wind W., so made long and short legs along the south coast of Sweden, which is very pretty though low lying. By 2.15 p.m. Smygehulk point was abeam. We had sailed 18 miles in 3¼ hours which equals between 5 and 6 knots, good going, as we had a smart breeze. Then we steered for Moen Lyn (Denmark) close hauled, making 5 knots good. By 6.00 p.m. we had done 20 miles of the 40 across to Moen Lyn, and the wind having been very light for an hour had now come S.W., so we had a dead beat. 7.00 p.m. brought a heavy squall, wind howling, and steep sea, but the wind was more W. and so we were able to lay S.W. At 10.00 p.m. Moen Lyn was abeam, and the wind ahead, so we stood offshore and then in, all through the night.

July 27. 10.00 a.m. We cut through the Geydser Reef, beating to windward in a fresh breeze, heeled right down, and doing 5 to 6 knots through the water. The Geydser Reef extends 10 miles to sea, but both on the outward and homeward passage it paid us to take one of the cuts through it about two miles offshore, keeping a lookout for breakers over rocks, an easy job as each time there was plenty of wind and sea. We stood off-shore 3 miles and then came about, making good time till 12.30 p.m. (noon) when our speed dropped to 2 knots as the wind eased up. Soon after rounding the Geydser, we saw a fine three-masted schooner ahead and to windward, but we beat her easily, sailing higher in the wind, and going faster through the water, conditions being ideal for us, as we could just carry full sail, but ought to have had a reef in. At 7.45 p.m. we just made the S.E. point of Femern Island, and coming about could lay up along a weather shore, which gave us smooth water for dinner, the wind being fresh again with a jumpy quick sea. The 8 miles of smooth water, gained by tacking specially for it, gave us nice time for a comfortable meal. Once clear of the island, we began bucking the seas again, and had a lively night.

The next day, July 28, at 11.00 a.m., we passed *Kiel Light Vessel.* We had had a strong wind all night, which fell away, and had been light since 8.00 a.m. We were still beating to windward, as we had been since we left Ystead on the south coast of Sweden. At times we had hard squalls of wind with rain, then the wind eased again. At 2.00 p.m. we moored outside Holtenau entrance to the Kiel canal, and at 4.00 p.m. entered the lock. Raining hard. We were in luck's way for a tow through, as in the same lock was *Solaz*, owned by A. M. Symington, who had cruised in her from Spain to Norway via Scotland, and had just come down through Denmark. She is a motor cruiser of 100 tons, so we towed through the canal behind her in style, tying up for the night at Brunsbuttelkoog.

July 29 we passed through the locks at Brunsbuttelkoog with the *Solaz*. It was blowing a gale N.W. and the tide was against us, so her owner thoughtfully suggested towing us to Cuxhaven, another 15 miles down the river, where we could wait till the weather was better. We took off most of our clothes, as it was a wet passage, being towed 9 knots into a short sea. We found the 160 tons schooner *Amphitrite* in Cuxhaven; she had just been out to the outer *Elbe Light Vessel* and returned as the N.W. gale was playing up old gooseberry on the bar.

Wednesday and Thursday were spent exploring Cuxhaven, as the weather signals said N.W. wind force 8, which is a fresh gale. A trading schooner came in; two of her people had been washed overboard at the bar; how she recovered them I cannot think, but one was dead and the other in hospital, so we were content to stay.

On August 1 the glass was up, and the wind dying away, so we got away on the tide at 7.45 p.m. (It seemed strange to have to deal with tides again after being in the tideless Baltic). It was a dead beat out to the entrance, and we were at the outer *Elbe Light Vessel* at 12.30 midnight. Although the wind had died right away, there were still some steep waves rolling in, and at times we shipped them solid, so imagined what it had been like here during the gale. (The Channel race round the *Sovereign*, Havre and back to Cowes, started that day and only one ocean racer, *Spica*, survived the course.)

August 2. 1.00 a.m. After being becalmed, the wind shifted from N.W. and came out of the S.E. in a sharp squall, and then settled down and enabled *Vigilant* to sail well till 9.30 a.m., by which time we were to the north of Borkum, when the wind eased away. At 3.15 p.m. we sailed sedately past *Borkum Riff*. This Light Vessel is to the west of Borkum. By 6.00 p.m. we were becalmed again 12 miles to the west of *Borkum Riff* for a while, then the wind came again light from the south, working S.W., and pushing us to the N. of our course. Finally at midnight it came W.S.W. right ahead, and began to blow hard. We were 16 miles E.N.E. of Terschelling, heading W.N.W. doing about 5 knots; as yet there was not a heavy sea, but everything pointed to a hard beat to windward of 150 miles to Lowestoft, where we were bound, as *Vigilant* had been entered for the races during the Royal Norfolk and Suffolk Sea Week.

At 6.00 a.m. on August 3 we tacked ship after sailing

30 miles W.N.W., and could lay S.S.W. on the starboard tack. I intended working to the north of our course to Lowestoft, as a S.W. wind usually finishes up N.W. and I like to be windward when this happens and able to take advantage of it. At noon, we went about on the port tack after sailing 30 miles. Towing a log stops a boat, and although we carried two aboard, we did not use either, as we could judge our speed quite well. 9.00 a.m. the next morning a steamer passed us with her starboard bridge swept away, and her two starboard lifeboats almost upside down in the davits; she had evidently shipped a heavy sea; I called Bob up to see this cheering sight, and it was nice to know that we were not the only boat taking water aboard. The wind eased at times, so our average speed of 5 knots dropped to about 4 knots, and we carried on for 12 hours on the port tack, coming about again at midnight.

On August 4 the wind was still dead ahead; at times it eased right down, and then it was fierce for an hour or so. All the fishing smacks we had passed had had a reef and topsail, and I have been told by owners of these that that means the wind is about gale force. Noon. The glass had been going down ever since we left Cuxhaven. We could not see it, but reckoned we were about 10 miles W. from *Smith's Knoll Light Vessel.* The log reads: 'Glass down 7 tenths and going down fast; becalmed in a sea that simply jumps straight up like pyramids, as seen in very early paintings, before artists realised the shape of waves. Looks dirty, have managed to stick full sail till now, but decide to reef, as there is a feeling in the air that there is trouble about.' We had just reefed her down, showing about

100 sq. ft. of sail, with full jib and well reefed main, when the wind jumped at us from the N.E., and we started to rush along; it then blew from all round the compass, in hard short squalls, and finally settled in the N.N.W. and blew very fiercely while we tore along. It was now Bob's watch, so I went below and turned in. Soon after I got below the wind came ahead, so of course we slowed down to 5 knots against a steep sea. Bob tacked her after we'd gone 10 miles S.S.W., and he had rather a strenuous time. The helmsman, besides having to steer, had to pump hard to keep pace with the water shipped, as we had not a self-bailing cockpit, and *Vigilant* often dipped her cabin top and the sides of the cockpit in her efforts to defy what must have been a gale. At 4.30 p.m. the wind eased, so we gave her full sail again, and by 9.00 p.m. were 5 miles N.E. of Lowestoft, which was plainly visible. The wind now fell right away, and those last 5 miles took us 3 hours to sail, so we did not arrive till midnight, having sailed 150 miles dead to windward in 48 hours against a heavy sea, an average of 3 knots, and very good for a small vessel. The Customs came aboard and we had a tea-party, the tea in this case being rum! They told us that all the regattas on the Broads had been postponed for weather that day, that *Britannia* and her class had not faced the starting gun in the sheltered Solent, that most of the boats in the Channel race had given it up, so we drank to the weatherly qualities of *Vigilant.*

To bed on August 5 at 3.30 a.m. after the tea-party, and were up again at 6.00 a.m. after 2½ hours' sleep. At 7.30 a.m. we left Lowestoft and sailed up to Oulton Broad, where we had to wait for the railway bridge.

We moored up on Oulton Broad off Wooden's yard at 9.00 a.m. and soon cleared everything out of *Vigilant*, and Bob came home by train, while I stayed to race in the dinghies that afternoon.

The next day I caught the train to Cowes, had a yarn in London to break the journey, and arrived home at tea time. I saw the rest of Cowes Week, and was very sorry to hear of the *Lucilla* being sunk in Cowes Roads after her cruising to Sandhamn and back without any harm; which shows that the open sea is no more dangerous than a crowded roadstead. After Cowes Week I returned to Oulton Broad and Lowestoft for the racing there.

Then at noon on September 2 *Vigilant* sailed out of Lowestoft bound for Cowes. On board were Peter Brett, a hefty youngster still at Oxford, myself and Mollie, my wire-haired terrier. Our animals are long suffering; the only real joy in life for Mollie is rabbit shooting or killing rats, and yet she sailed with us to Cowes without any complaint, not even when she fell overboard.

12.30 p.m. Off Pakefield, there was hardly a breath of wind. Tom Thornycroft bound to Cowes with *King Duck*, his wonderful new motor cruiser, took us in tow. On board *King Duck* he had his international 14-footer *Golden Eye* with which he had just won the Prince of Wales Cup, and also his son's 14-footer. At 3.00 p.m. having towed us at 10 knots we cast off at the *Shipwash Light Vessel.* 3.15 p.m The tide would soon turn against us, the wind was light and dead ahead, so we decided to go for Harwich. At 6.25 p.m. we were inside Harwich Harbour, having sailed 18 miles in just over 3 hours, an average of 6 knots, the wind having freshened after we had headed for Harwich.

At noon, September 3, we left Harwich. The wind had shifted to E.S.E., and we had it ahead when first out of the harbour, but after clearing some shallow patches we were away down Barrow Deep through Fisherman's Gat, past the North Foreland, and into Dover at 7.20 p.m.

September 4 at 9.00 a.m. we left Dover, with a foul tide, and a nice breeze from the S.E., doing 6 knots through the water. 1.15 p.m. found us off Dungeness, 6.00 p.m. off Beachy Head, and by midnight we were at the *Owers*, having a fine breeze all day.

September 5. 3.00 a.m. The wind had fallen away to a calm, so after passing the Warner we tied up to Seaview pier, as the tide was foul. We had taken 18 hours from Dover, making our average 6 knots, which is good, as we had had two foul tides and one fair tide, while only at times had the wind been strong enough to make *Vigilant* plane. I took Molly for a walk and then turned in; we still had no need for a dinghy. It was fun sailing the *Vigilant* round inside the inner harbour at Dover, and beating her out through the lock gates. At 9.00 a.m. we were under way for Cowes, as the tide had turned with us. We had no wind, but somehow we sailed along past Ryde, and entered Cowes Harbour at 11.45 a.m. While we were in Osborne Bay the wind came from the west, so the last part of our cruise ended in another turn to windward. The previous day the clouds, high up, had been coming from the west and the falling glass had foretold the west wind. We sailed up to Kingston, moored up to the pier we had left, and so ended a very enjoyable cruise which showed *Vigilant* to be a boat with a remarkable turn of speed for her length, and for her size, and considering the smallness of her crew, a very able sea boat. I had gained a stone in weight while on the cruise, and would advise anyone run down to get a small manly boat and go for a cruise; there is very little worry with a small boat, for you can reef her under almost any conditions in 10 minutes if she has only 236 sq. ft. of sail, which divided into two makes the sails very small indeed. Then, too, with such a small boat there is no need to have a dinghy with all its worries.

Cowes to Sandhamn, 17 days.
Sandhamn to Lowestoft, 14 days.

Arrived home, I used her cruising around the waters of the Wight until Christmas, and again the following summer, my last sail of all being from Cowes through Portland Race to Brixham and Torquay, for Edmund Oldfield of Torquay bought her and asked me to sail her down for him. An account of this passage will give an idea of *Vigilant's* ability to windward in strong weather.

We left Cowes with a strong sou'-west wind, which promised us a dead beat the whole way. A strong weather-going tide made a steep sea, but *Vigilant* climbed this and only spray came aboard, so well suited was her light long easy hull to the Solent seas. On this my last sail in this brave little vessel there was no thought of reefing; I intended to drive her to the utmost, as she always revelled in being driven hard, and so she lifted over and through the Solent seas and gave Buster and me aboard her a feeling of fierce delight by the manly way in which she lifted and sailed to windward.

At Portland Bill we had a good fair tide under us, and as it was my last sail and the only chance I would ever have of seeing her in such troubled waters as are found in Portland Race and similar races, I intentionally put her through it. With the strong wind blowing we could easily have taken the narrow passage between the Race and the Bill itself, but instead she was battened down, and Buster went below while I tied myself in the cockpit with the end of the mainsheet, and so we came to the roaring and steep breaking seas of the Race itself. These seas were really terrifying, for as all who know the Race are aware, they come in at all angles and are steep walls of water which seem intent on crashing down and overwhelming any ship that finds itself among them. But *Vigilant* was so responsive to her helm and so quick that she could be dodged and twisted about, so as to miss the worst of the seas, and I felt like a fencer as she pointed this way and that. She came through unharmed and arrived at the comparatively smooth waters to windward of the Race, and in the steep and fairly regular Channel sea I discovered that I had sustained a sprained wrist coming through, how, I know not. Now we made a long leg into the Bay, and so close and well did *Vigilant* lay into that strong breeze that we made Dawlish in one long tack, then coming about stood on and off the shore, finally arriving in Brixham where, though we still had our full sail, the Brixham trawlers, famed for their sea-going ability, were all sailing with reefed mainsails and topsails set above.

The owner met us at Brixham, and we set sail for *Vigilant's* home port, Torquay. The wind on this leg was just abaft the beam, and though we reefed *Vigilant*, to show the reefing gear worked, she sailed the four miles from Brixham into Torquay Harbour in exactly half an hour, which gave her a speed of exactly eight knots over the distance.

We picked up our mooring, but *Vigilant* and the rest of the boats moored at Torquay were tumbling about so badly in the hard S.W. wind that it was most uncomfortable being on board, and my last sight of *Vigilant* as we rowed ashore was of her rolling heavily.

Vigilant had confirmed the fact that a long, easily driven hull, of fairly light displacement, could be a good sea boat providing she is given a seaworthy rig, and that we do not understand enough about the behaviour of long easy hulls in a sea way. The old Viking ships and the modern destroyers give us examples of the sea-keeping powers of such hulls, and *Vigilant* gave me a great deal of understanding.

Chapter VI

TO BRITTANY IN *BRYNHILD*

Brynhild *is an enlarged racing canoe, being 20 ft. overall and 4 ft. beam, and was designed for two sliding seats. As human beings are, generally speaking, fond of company, it is possible that future years will see rules made to foster a class of racing canoes similar to* Brynhild, *when canoeists will be able to race and enjoy the companionship of a fellow canoeist while doing so.*

If we are fond of music, we play some instrument or sing, so that we may enjoy it, and if we are fond of the sea, we must sail on it in some form of boat. Our choice of a boat is as wide as our choice of a musical instrument; and for a cruise across Channel and along the Normandy and Brittany coasts down the Bay of Biscay to Spain and possibly the Mediterranean, I chose, designed and built a 20-foot double-handed sliding-seat canoe.

I am very fortunate in being able to enjoy sailing in every kind of vessel, from a Thames Barge to a 'J' class boat and from an ocean racer to a racing canoe. The choice of *Brynhild* was not a blind one, but was made for several reasons:

(1) I know nothing more exhilarating than flying over the water at 12 to 15 knots on the end of a canoe's sliding seat.

(2) Such a boat with her speed would be a good performer even to windward.

(3) She would enable us to explore many little harbours and dart in amongst the rocks which are scattered everywhere along the Brittany and Normandy coasts, west of Cherbourg, and

(4) I am now getting on in life, and have only a few more years in which I can really enjoy sailing so small a boat, in which with the least wind one is wet through all the while. In such a boat one has all the excitement of a gale of wind in a fresh breeze, when the seas call for constant attention and demand every ounce of her helmsman's ability. Sailing her for eight hours, one puts forth as much care and attention, and understanding of wind and waves, as one would in four times that length of time in a larger vessel.

I designed *Brynhild* in the autumn of 1935, with very long and easy buttocks, and she is an easily driven craft with powerful sections, capable of a very high speed. Having, in a 17-foot sliding-seat canoe, sailed 16.3 knots over the Medina measured ½ mile (a performance which took four months and an untold number of efforts to accomplish), I thought that a 20-footer with two up might plane at 20 knots, but we have so far only sailed at 15. Generally in those half mile runs I became exhausted physically, as battling with a sliding seat canoe in a hard wind calls for perfect physical fitness, and even then one burns up far more energy than can be afforded: hence the advantage of having two up.

She is very lightly built. This is necessary for a cruising canoe, as it enables her to climb the seas, and also enables her crew to carry her up over a beach. *Bryn-*

hild was fitted with a wooden drop keel, the bottom of which is ballasted by 50 lbs. of lead, and abaft this the rudder, dropping down through the trunk, so that it is quickly removable when coming into shallow water.

Over the drop keel are two sliding seats, and the deck has various hatch openings. The four small hatches in the watertight cockpit were never used; instead we used four other hatches in the sides of the cockpit, as these were easier to keep tight. Aft she has one large hatchway between the rudder and cockpit, in which we stowed a watertight box for special gear, and right aft was a very small hatch used for sponging water out of the stern when on a slipway.

Her timbers, $\frac{5}{16}$ in. × $\frac{3}{16}$ in., are spaced $1\frac{3}{4}$ in. centres, and to these the $\frac{1}{16}$ in. bare diagonal planking is fastened. After a skin of oiled silk, the $\frac{1}{8}$ in. bare planking is fastened by 17-gauge nails, which are clenched on the insides of the timbers. The deck, of $\frac{5}{32}$ in. thick sea-resisting plywood, is fastened to $1\frac{5}{8}$ in. × $\frac{3}{8}$ in. beams spaced 10 in. apart; the effect of this light construction is that, though 20 ft. long, the canoe weighs no more than 190 lbs., which two men can carry up a beach.

The photographs show the sliding seats swung right out to port and it is surprising how the sail carrying ability of a canoe is increased by her crew of two sitting four feet out beyond her side. These seats, when evenly slid on either side, make fine carrying planks, easily held and strong enough for us to carry *Brynhild* by them, with a man at each end lifting the bow and stern to steady her.

In her first sail plan the mainboom ran forward of the mast to take the tack of the jib, the idea of this being that as the main sheet is eased the jib is too, for being sheeted on the boom it swings at all times with the mainsail, and besides this the forestay, pulling up on the fore end of the boom, prevents the after end cocking up when the sheet is eased, which means that the sail swings out on one plane like a door. Now, though this is a fine rig for a steady wind, we found it was no good in puffy weather, for then when we eased the sheet in a squall, the whole rig swung round and the wind spilled out everywhere at once, so that we had either all the sail drawing or none at all. For our cruise therefore we went back to the normal rig as shown by the photograph; with this we could ease the mainsail right away, with the jib still pulling. With a total area of 120 sq. ft., we could ease away two-thirds in the mainsail and let the remaining third in the staysail pull her through a squall, or by easing half the mainsail we could ease away one-third; and this made sailing her much easier.

The mast for the second rig did not revolve as the first did, though like the first it was stepped on the deck.

It was early in December when we launched *Brynhild*, and a S.W. gale was blowing, which was full of very hard slams, such as are only experienced in the dead of winter. Thus on our very first sail we saw the disadvantage of a rig which was not elastic, and which forced us to have the sails right full or empty. We at once changed over to the other rig, intending to test the revolving rig later when the weather settled down. Actually we have never done so. Though we sailed *Brynhild* through December and the rest of the winter months we never reached a speed of 20 knots, 15 being the highest we ever obtained. All through the spring I was so busy that *Brynhild* remained in her shed. Then came a day on which cruisers were to race from the East Cowes Sailing Club to Lymington and back. A strong wind was blowing, and I sailed *Brynhild* in this race single-handed, learning far more than I should have done with a crew. The wind being S.W. made it a dead beat to Lymington, the very thing to teach me everything possible about *Brynhild.* I started with full sail, and led the fleet of cruisers and six-metres out of the river, but when clear of the light off Egypt Point, and in the full weight of wind, *Brynhild* was overpowered so I put a reef in her mainsail. She was still overpowered, and the jib tended to put her head off to leeward, so after another tack across the Solent I took the jib off her and sailed her down to Lymington with the mainsail only. Thus relieved, she immediately started to go to windward in fine style, for she was under perfect control and responded to the slightest movement of the tiller. She rounded Lymington Spit buoy with only two six-metres and a 17-ton cutter in front of her. As it was a dead run back up the Solent in a steep sea, she could not plane, and was unable to catch these larger vessels off the wind, as she would have had it been a reach. Even so she won second prize, a prize I shall cherish, for the winning of it pointed out to me forcibly, that with a light boat like a canoe, the first sail to take in is the jib, as the stowing of this gives the helmsman perfect command over his vessel. Every sail in *Brynhild* taught me something more about her ways, and how she should be sailed and treated.

I had planned to start our cruise at the end of May, but unfortunately work kept me prisoner till the middle of June, and it was not until early in that month that we began to fit her out. In this world it seems that the less things we need, the happier we are; then everything but the bare necessities becomes a luxury and fills us with content. Football is one of the most enjoyable of games, and for it all that is really needed is a ball. So with this canoe cruise: her very size kept the number of things to be taken aboard down to a minimum. Even so the list is pretty formidable, although their total weight was less than one cwt. On this side of the Atlantic we could not depend upon fine enough weather to sleep out without a tent; this meant that two tents had to be carried, one that fitted over the mainboom of the canoe, and another that would sleep two on shore, for in some places it would be impossible to sleep in the boat, and in others impossible to sleep ashore. Both tents and their gear, and our two eiderdown sleeping bags, weighed less than 20 lbs., thanks to the great modern improvements in camping requisites. It was much the same with our cooking gear and saucepans, the whole lot weighing very little, and once we had crossed the Channel, it was only necessary for us to take one day's food supply with us. For the actual crossing, though I hoped it would only take us something like ten hours, I wanted food for three or four days.

Our clothing we kept down to a minimum, as the list will show. Apart from our sailing clothes, we each had only trousers, jacket, shirt, socks and pyjamas in the boat. This saved us a lot of trouble, for directly we arrived at any place, we changed into our dry clothes and spread our sailing clothes out to dry, whereas had we had more than one suit we should have always wondered which to wear.

In calm weather we could cook under way such things as sausages, eggs and bacon or soup, and for rough weather I took a large quantity of milk chocolate and plain biscuits, which can be eaten in the roughest of weather and contain a great deal of nourishment and energy.

* * *

The following list of gear is given, as it may prove useful, not only to canoe cruisers but people using such boats as converted six-metres for cruising, for it represents the minimum amount of stuff one should put to sea with, and can be increased to suit various boats and their voyages. It took but two days to collect the whole of this stuff, and to find stowage space for it in the canoe, the heavier things being concentrated amidships, though our clothes and tents had to be in the ends because of the larger hatchways there.

LIST OF GEAR

Navigation
- Charts
- Pilot Books
- Compass
- Dividers
- Parallel Rulers
- 2 Electric Lamps, one water-proof

For Canoe
- 1 tin Flares
- 1 First Aid Outfit
- Spare Jib Sheets
- Spare Main Sheet
- Spare Winch Handle

Writing
- Log Book
- Pencils
- Paper
- Typewriter
- Camera
- Films

Housing and Sleeping
- 1 Shore Tent and Tent Pegs and Pole
- 1 Canoe Tent
- 2 Eiderdown Sleeping Bags

(*continued overleaf*)

2 Oars
3 Rowlocks
Holdall

Food

Bread
Butter
Tea
Sugar
Trex
Salt
Eggs
Bacon
Bananas
Tinned Meat
Potted Meat
Milk
Sausages
Cocoa
Tinned Fruit
Beans
Soup
Milk Chocolate
Biscuits
Mustard
Sardines
Cheese
Apples

Cooking

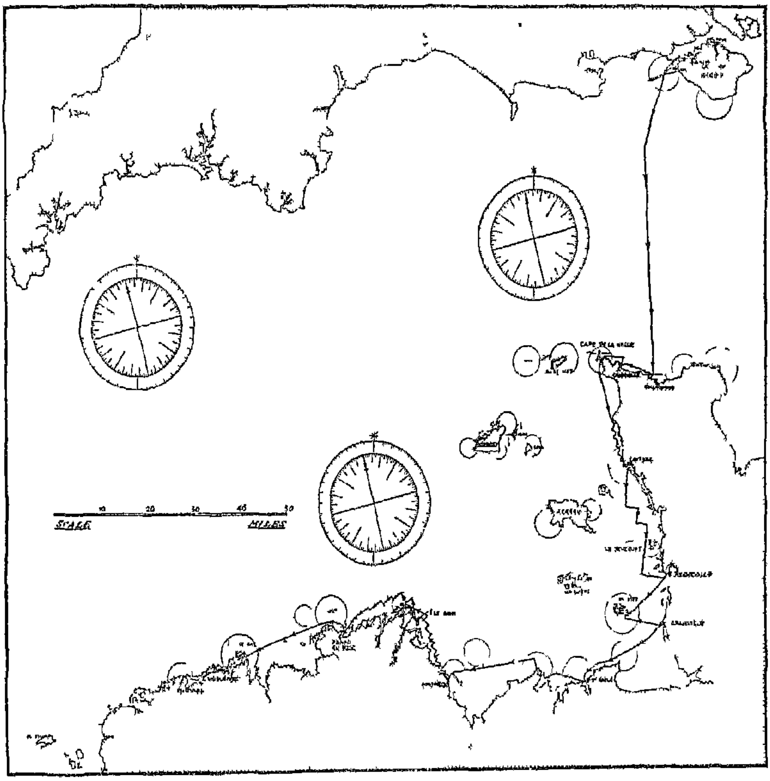
1 Petrol Primus (saucepan and frying pan)
1 Paraffin Primus
1 Frying Pan
2 Cups
2 Plates
2 Spoons
2 Knives
2 Forks
2-gallon Water Container
1 Petrol Tin
1 Paraffin Tin
1 Methylated Tin
1 Bucket
1 Tin Matches
2 Candles
1 Tin Opener

Clothes

1 pair Trousers
1 Shirt
1 Jacket
Pyjamas
1 pair Socks
1 pair Canvas Shoes
1 Handkerchief
Shaving Tackle
Neck-tie

* * *

Wednesday, June 17. A canoe, like any other vessel, is never really ready for sea, and the only way to leave is to go away ready or not. So at 2.00 p.m. we left our slipway on the Medina, and started on our way, two essential things being missing, time and money; we therefore sailed into the Watchhouse Slipway, and there I ran ashore to the Westminster Bank, who gave me a fine wad of traveller's cheques, then visited Atkey's to buy a cheap watch, and thence to the Customs for a Bill of Health, without which no vessel should ever leave for foreign waters. At 2.30 p.m. we left the Watchhouse Slipway, Cowes, with the last



drain of the ebb helping us out towards the Needles, so we knew it would be impossible to start for France that day, as it would be late at night when we reached the Needles.

Within an hour we were up to Salt Mead Ledge buoy, with the tide and wind both against us, so we stood off once more into the middle of the Solent where the tide would be easier, as it turned later there, and at 4.30 p.m. entered Newtown River, where we had tea. Here we saw a bird neither of us had seen before. It had black wings with white stripes and a red beak, and had an almost tropical appearance.

At 7.45 p.m. we left Newtown, the wind still ahead and the tide not yet turned, but high enough to enable us to get in over the shallows and cheat it. At 8.45 p.m., as the tide was still against us, we went ashore inside of Hampstead Ledge, cooked sausages and eggs and cocoa, and finished our meal with apples and bananas. This, as well as making our supper, ensured that we had all our cooking gear in order.

After an hour we were under way once more, the tide having turned inshore, and as the sun had set, the wind soon went into the south, pulling off the island shore. We sailed along full of food and at peace with all the world, for we had a fair tide and could lay our course, while the nightjars ashore gurgled their soothing song to us, which came out over the water very sweetly.

Just after midnight we anchored in Totland Bay. There was no wind and the night was fine, so we did not bother to put a tent up, but turned in under the mainsail all standing, and slept quite well for four hours, turning out at 4.30 a.m. to cook and eat our breakfast.

Thursday, June 18. At 6.00 a.m. we were under way with a light easterly wind, and the tide still against us in through the Needles. It was not until 7.30 a.m. that we passed the Needles Rocks, being able to steer S.S.W., close hauled, the wind being S.E., the sky overcast and rain falling. Though this course was slightly to leeward of our course for Cherbourg, the wind was strong enough to let us walk along at some five knots, which was quite satisfactory.

As we got further offshore, the wind continued to freshen, and the rain to get heavier, although visibility was good, being about five miles. The wind then freed, and enabled us to lay our course for Cherbourg with the wind abeam. As it was steadily freshening, we knew it was only a question of time before we would have to reef down and go slower because of the seas, so we drove *Brynhild* as hard as we could while we were able, and she rushed across the tops of the waves at 10 or 12 knots, every so often slowing down to about 4 knots when she stuck her bow into the sea in front. As we crossed the steamer line we judged the speed of the wind to be 25 to 30 miles an hour, for the steamers were going along at 15 knots and their smoke was being blown ahead of them as fast as they were travelling. We continued pushing *Brynhild* with full sail. Steering was very tricky work, for at the speed we were travelling it seemed possible to roll her completely over by giving her a lot of helm at once, and so I had to anticipate her every move in advance, using only the smallest amount of rudder. It was most exciting rushing along in this sea, for when we got on the face of a wave, we would, it seemed, tear along at 30 miles an hour, though of course it was no more than 12 or 14. At 10.00 a.m. a very heavy squall settled in and we had to reef. First of all we took in the jib and then reefed the mainsail. We still had too much sail and were travelling too fast for the sea running, so we rolled up some more until finally the number in the top of the sail was only just showing clear above the boom, and even with this tiny amount of sail, some 20 sq. ft., we were going 7 and 8 knots, too fast for the sea running, but because of her light displacement *Brynhild* did not disturb the sea at all, and so all was well.

Some time after this the wind eased, so we gave her the jib; this was too much, so it came in again, and we unrolled some of the mainsail, being able to adjust our sail area to suit the seas in this way. Throughout the day we reefed and unreefed, as an easterly wind is never true in strength or direction. Finally the wind dropped so that we could carry full sail. As we were approaching the French coast our speed eased down to some 4 knots. At 2.35 p.m. the land behind Cherbourg was in sight about 9 or 10 miles away, but we had hardly a breath of wind, and the land became blotted out by fog. At 3.15 p.m. we were becalmed, and it was not until 7.30 p.m. that we entered Cherbourg with a very faint air from the E.S.E., exactly 12 hours from the Needles, our average across being only 5 knots. Up to the time of sighting the French coast through the fog, we had averaged 7 knots, and had the wind not increased and blown so hard we might easily have averaged 10. Even so, it was quite a fast passage for such a small boat.

The west end of Cherbourg Harbour is formed by the bay called Anse de Ste. Anne, and we went around into this as the basin in the town itself was of little use to us for pitching tents or sleeping aboard the canoe. Here we soon had the boat above high water mark, our tent pitched on it over the boom, and the tent ashore for Bill to sleep in, for no sooner had we touched than some fifty people came down to greet us and help us up with the canoe. We spent a very enjoyable evening here, going into Cherbourg next morning to change our traveller's cheques into French francs.

Friday, June 19. It would be high water at noon, so we left at 11.45 a.m., with a fairly thick fog but no wind, relying on the tide alone to take us down to and through the Alderney Race some twelve miles away. At 12.45 p.m. the red beacon off Urville was abeam, so the tide was taking us along the coast at 3 knots. At 2.00 p.m. still no wind, and the tide finished somewhere round 4.00 p.m., when it would seem we should just be the other side of Cape de la Hague, and the flood would whistle us back through Alderney Race, and probably carry us offshore; so we decided to enter Ormonville, a tiny harbour formed by outlying rocks and a breakwater. We stood in for this harbour and made it quite safely, using a fisherman's short cut into it instead of the proper channel; for, going in, a tower should be left to starboard, which we left to port. Though it was practically low water we did not touch, in spite of having our board right down, and so drawing practically five feet.

Inside the harbour itself there was a decent little breeze, and just to make sure that this was only local we sailed out again, but once clear were becalmed, and so came in again, this time by the proper entrance.

We pitched one tent ashore, and one over the canoe, which was just as well, for at 4.00 p.m. we had a very heavy thunderstorm with drenching rain, during which we cooked and fed in the tent. Here we saw the Douanier (Customs officers) and for six and a half francs received the French Bill of Health, which would enable us to enter and leave all the French ports as we wished. We were also fortunate enough to meet a French yachtsman, who besides a house and yacht in Cherbourg, owned a house near by with a mooring off the harbour of St. Germain, where we spent a very enjoyable evening.

Saturday, June 20. It was high water at Dover 11.48 a.m. plus one hour, making it 12.48 p.m. summer time, and as the S.W. stream starts in Alderney Race one hour before high water at Dover we wanted to start at 10.30 a.m., for close inshore there was an eddy tide, which would take us down to Cape de la Hague before the main tide turned. There was a very thick fog, visibility being no more than fifty yards, and none of the tiny fishing fleet left Ormonville that morning, nor was there any argument amongst the fishermen as to whether we should go, for they all agreed it was wrong for us to sail along that coast in fog with its strong tides and dangerous rocks. But one young fisherman very kindly said something to the effect that fortune favours the brave, or, as I would put it, 'Ugly ones for luck,' and this enabled us to depart in thick fog with a clear conscience, for we knew that at the right moment the fog would lift and all would be well.

We steered out on a N.E. course for 1½ miles to clear the rocks off the coast, for though we could dodge in between them in clear weather, it would have been fatal in this thick fog with the tides running at their very strongest, as they were on the top of the springs. Then we tacked and stood at W.N.W., the wind being light and northerly. A fog seldom lifts with the wind on the shore, but as we approached Cape de la Hague, a little puff came offshore and lifted it a little, enabling us to see the semaphore tower, which showed us that we were exactly where we should be, just outside and clear of all the rocks. Then it shut down again as thick as ever, leaving us wrapped in mist, sailing along at some three knots which, with a four knot tide under us, gave us a speed of 7 knots over the ground.

At 11.50 a.m., just as we were off the point of Cape de la Hague, the fog was suddenly blown away by a smart northerly wind, and we decided to go through the rocks inside the Cape de la Hague light, as here we knew we had a very strong fair tide, for we could see it roaring past the rocks. Sailing at some seven knots with a fair tide of perhaps the same speed, we fairly tramped along and had passed through this passage between the rocks by 12.05 p.m., and at 12.40 p.m. had Nez de Jobourg abeam, and then the wind fell away very light. The Isle of Alderney was still hidden by the fog, and we never caught a glimpse of it, but off Jobourg five Jersey planes flew over together having waited for the fog to lift before they started on their journey to England.

The coast proved most interesting and attractive now that we could see it; the shore showed rugged land with rocks jutting out, plumb cliffs, and here and there little bays from which the cliffs sloped away gently inland; a rugged coast that in sunshine looked pleasant, but in storms would be very forbidding, and we were lucky to enjoy it in sun and light wind.

Since leaving Ormonville we had passed two tiny harbours, suitable for small craft only, one at St. Germain, and the other the tiny harbour of Goury just inside Cape de la Hague lighthouse. Now our course took us south towards Cape de Flamanville, some ten miles away. But two miles to the S. of Jobourg were the rocks known as Les Huguets de Jobourg, standing 14 ft. out of the sea, and just inside these were others 16 ft. high, the latter being some three miles from the shore. In daytime they are visible, and during the night, as long as Cape de la Hague lighthouse is well open of the point Nez de Jobourg, they are cleared.

Our sail across the bay was peaceful and pleasant, the tide setting here S.S.E., practically where we wanted to go, and at 3.35 p.m. we had Cape de Flamanville abeam. We had sailed 15 miles in three and a half hours, which meant 4 knots good, and as the wind was light, and we were only sailing from one to two knots, we knew that the tide must be running anything from two to three knots across the bay.

Sailing along this coast with all its artificial harbours, my mind went back to the time of Napoleon and his intended invasion of England, when war vessels of all types were being built along these sea coasts, even as far inland as Paris, and harbours that were useless before the war were reconstructed. All the while this was going on our navy was blockading Brest, harassing the builders and the French ships, performing acts of great bravery, and superb seamanship and pilotage, and enduring great hardships in order to prevent the French army embarking. Probably Napoleon was a little disappointed at not being able to conquer Britain, and the recalling of a passage from our naval history written in Napoleon's time gave me food for thought:

'Buonaparte was not the first foreigner who had reckoned too much upon the grumbling character of the English; he did not consider that, although discontented with their Government, they were extremely jealous of foreigners. He ought to have known that, in such a case, a third party would experience much the same treatment as proverbially follows a similar interference in domestic disagreements: the hitherto mutually opposed parties unite, heart and hand, to expel the intruder. The treatment which, at a subsequent period of his life, Napoleon experienced from the English populace, tended, owing to a misconception on his part, to strengthen the opinion he had originally formed of the "canaille" to aid him in conquering their country. There, again, he mistook the character of the people. It was not love for his person which collected the crowd that flocked from far and near to gain a sight of him: it was curiosity, endemial curiosity, to behold a man who had compelled most monarchs but their own to succumb to him; who had governed, if not conquered, all Europe, save the little insulated spot in whose power he then was. If they forbore to upbraid or taunt him, it was because he was their prisoner: if they treated him with respect, and even with kindness, it was because they felt some degree of awe in the presence of one who had been so mighty a potentate, and commiserated his fallen greatness.'

The world still tends to look upon Britishers as rather stupid and grumbling folks, and it is not until we are at war, and when all hearts are open that they realise with a shock we are best left alone, for in spite of everything that has ever been said, the British Empire always is united and is one big family when need arises.

At Flamanville two heavy thunderstorms came up from the south, and we had quite a smart breeze ahead, one of these working up after the other, enabling us to stand offshore to miss the first one, and then stand right in under the rocks and so miss the second, but though we missed the worst of the wind and rain, we were soaked through and also had a strongish breeze. By 4.50 p.m. we were close in off Point Rosel, where there were ten fishing dories on the beach, just to the S. of the rocks off the point. This beach, it seemed, was their base. The tide was now rising, for as we approached the point the rocks that had been standing above the sea were covered, which gave us an idea of the speed at which the tide rises in these parts.

The tide being against us now we stood close in along the shore of this sandy bay, and making short tacks along continued our way to Cape Carteret, arriving there to find a very strong tide roaring round the point against us. Here the wind fell away to a calm, though from the S. great thunderstorms were working their way along the coast. We closed right in to the point, and getting out the oars, Bill started to row round it. As the tide was rising, and had already covered some of the rocks, we were able to go over these and right alongside the cliff itself, the oars at times touching the rocks and at times the boat herself touching, but the only way round was to do this, for to stand offshore then would have meant being swept back into the bay. Once we went between two rocks which, with a strong stream against us and the sea surging over and then leaving them bare, made it a most dangerous and exciting proceeding. When we had safely passed these rocks, I immediately put the canoe the tide side of the inside rock, so that Bill, rowing, could see it some two feet astern, and knowing it was only he that could save us from being swept on it by the tide, he put his heart and soul into his rowing. There is no doubt such an emergency gets the very best out of an oarsman.

We kept plugging away, making ground very slowly. Whenever possible I put her right inside all the rocks where there was no tide to let Bill have a breather for a minute or two. Then we would fight our way past the next little point. All this while a great thunderstorm was coming up the coast very fast, and we knew that we should get wind from it, which would enable us to sail on. At the same time we knew that it would be a strong and therefore dangerous wind, for the game we were playing at the moment was a hazardous one, as we were flirting with these rugged rocks in a strong tide in our effort to make the harbour of Carteret, which was only some two miles away. When the squall was something like a mile off a fine little breeze came in, but it was dead ahead, so we laid in the oars and started beating to windward with very short tacks in and out and over the rocks; we knew well that we should have to reef quite soon, but were unable to meanwhile, as we had to get the utmost out of our boat, and as the great squall was rushing up to us we kept full sail to the last moment. Away overhead a heavy black cloud with a front of some two miles was rushing along, with two pure white clouds stretching along the full width ahead of it, very like large ostrich feathers, the whole advancing at something like 100 miles an hour. We were now very anxious, for the strength and direction of the wind that was in that cloud would throw us up on to the rocks as though we were a feather. Fortunately for us, however, we got no wind at all from that cloud, but the one following a quarter of a mile astern and a little lower, brought a very heavy squall, in which we took in our jib and reefed the mainsail well down and beat along the rocks.

It was an exciting sail, in which we made about 20 feet with every tack; but after a while the wind went a little more southerly and so made it a long and a short leg with the rocks to leeward. Now we gained more ground and finally weathered the last rock, which enabled us to stand right into the sandy bay just to the W. of the breakwater. Here with no tide we made ground rapidly, but standing out on the port tack with the breakwater close to windward, we were immediately swept down the coast a quarter of a mile; coming about, we brought the tide just on our lee bow, and this let us nose our way offshore without losing ground. When clear of the shore and I could start the sheets, *Brynhild* started to plane along at a very high speed, for it was blowing hard. In this manner we worked over the tide and quite soon were in the tumbling seas just inside the breakwater and rushing up the harbour at a fine clip.

The town was absolutely deserted; the heavy rain and wind had driven everybody indoors and hardly a soul saw us enter Carteret. We sailed on up into the river, which curved to starboard, and seeing on the port hand a fine bay with smooth water, we lowered sail and blew in there very fast under bare poles. Mooring the boat up (for it was now high water) we went into the Hotel Anglais, where a good hot bath and a good dinner filled us with joy, for we had made our harbour after a hard battle, and it is only after such a struggle that one really appreciates the safety and comfort of the land.

At our hotel there was an English artist, Eyres Simmons, and hanging on the wall were two of his water colours, one showing the sandy beach and the bay, which had enabled us to make the ground to the harbour, and the other the inside of the harbour. Both pictures were of peaceful sunny days, and I bought them to remind me of our fight, for I have a vivid picture of Carteret in wind, sea and rain, which turned a summer's day into hard winter weather, and these paintings of it in pleasant sunshine will help me to remember it as it was when we left the next noon.

Sunday, June 21. We were to leave at noon, when the tide would be practically low. Soon we launched *Brynhild*, and sailed her to the town slipway, where we left her while we had breakfast. Then we sailed to the pier end, where we moored her while we had an early lunch, as it would be dead low water at 12.30 p.m., when the harbour would practically dry out. At 12.15 p.m. we left Carteret with a light westerly air, which enabled us to sail along at about 2 knots, and at 12.45

p.m., when clear of the harbour, we saw by some crab pots that the tide, though weak, was still running N.W. against us, and it seemed that we would have a fair tide at 1.15 p.m. At exactly that time the Ecrehos rocks were abeam between us and the Isle of Jersey. These rocks, standing well out of the water, looked very vicious in the light that picked them out. An hour later we were becalmed for something like half an hour, when some faint airs from the N. enabled us to sail at about one knot.

The tide in this bay runs from all points of the compass in an anti-clockwise direction. At h.w. Dover it runs W., swings down to S.W., S., S.E., and runs to E. at l.w. Dover, for we were in the Bay of St. Malo, where the tides do not seem to follow the run of the land as they do in most places.

At 5.45 p.m. we had Le Senequet abeam, the wind being dead ahead, and blowing fairly hard, and we had been turning to windward most of the day. The Senequet lighthouse marks some rocks extending three miles offshore, and they were still uncovered as we passed by. Both of us were sitting out on the end of our slides, the waves washing us continually, and though we had hoped that by now the water would be warmer, it never is warm in this bay, for strong tides and the enormous rise and fall of 40 feet at St. Malo shift and disturb the water so much that it never has a chance to be warmed by the sun; the water deep down is continually coming up to the surface, and we were half frozen by the cold strength of the waves that swept in.

We continued our way, at one time standing as far as 8 miles offshore to make our harbour, but coming about could lay in to windward of the tower marking the rocks off Regneville, and when we had weathered this we could start the sheets slightly, and so make faster time.

The entrance to Regneville runs north, almost parallel with the coast, and so it did not reveal itself until we were actually in the mouth. Standing in for a harbour like this, where there is no sign of its existence, one always wonders if some mistake has been made in navigation, and one is not really off that place at all, but there is nothing for it but to stand on and on, and if in the end it proves to be the wrong place, then one must put to sea once more. So we stood in, in spite of the fact that there was no sign of an entrance, though there were houses ashore further north from where we reckoned the entrance to be. Then two small buoys appeared (a black and red) and we knew there was a harbour somewhere, for the French are too thrifty to waste buoys; and though they were not on our chart, I left the red to starboard and the black to port, and suddenly the entrance opened up before us, and we bore away and were soon rushing up the harbour with the tide boiling under us, for it had to fill a large space inside.

On the starboard hand, just inside, was a creek and the small village of Regneville, and we made for this, putting our canoe ashore on a sandy roadway. At 8 p.m., 20 minutes after we had arrived at the harbour entrance, the tide was still rising very rapidly, so we took the shore tent out and the gear we would need for it, while all the time we continued pulling the canoe up the road as the tide floated her. Pitching this tent, and one over the boom of the canoe, we were ready for the night by the time it was high water, which was at 9.10 p.m. By 9.15 p.m. the tide was dropping as fast as it had risen, so we went along to the Hotel Lemesle for dinner, returning to our tents and bed.

Regneville was an ideal place for us; there were few houses about, all around were green fields and we could pitch our tent right alongside the canoe. I should have liked to spend a few days there, but before turning in we decided to leave next day at noon.

Monday, June 22. After a good night's sleep we were up, and at 8 a.m. looking at the ruined chateau, now owned by Monsieur Coullier. It was interesting to wander over the ruins of this old castle which was almost destroyed by Richelieu in 1637. The steps leading up to the walls were thick with moss; the velvety tread on a stone stairway is delightfully soothing to the senses. Here and there were very old wide fireplaces, and in the cellars we could see the foundations of the chateau. Altogether we thoroughly enjoyed looking over these ruins and dreaming of their past history. On our way along the road we passed the old stone washing place, where at one time women washed all their clothes. But soon we had to tear ourselves away from this interesting village, and at 11 a.m. we pushed off from the shore two hours after high water, quietly drifted out of the harbour on the ebb tide, and at 11.30 a.m. had the red buoy at the entrance abeam, the tide setting W. straight out to sea. The wind was very light, and we shaped our course for the Iles Chausey, intending to pass fairly close to them, which would leave us a choice of going to the Grande Ile of Chausey, into Granville itself on the mainland, or straight on to St. Malo. At 2.15 p.m. we were abreast the bell buoy at the eastern end of Chausey, these islands being nothing but a mass of rocks.

By this time a heavy thunderstorm was working up over the bay of Mt. Saint Michel, and quite soon the Mont was invisible, then all the land and even Chausey itself was blotted out by heavy rain which was immediately followed by a strong wind, which caused us first to stow our jib and then reef the mainsail. The wind was S.W., enabling us to lay S., on the starboard tack, and so clear Chausey. After this we were completely becalmed. Then squall after squall came, each lasting a few minutes, and between each we were becalmed. After 1½ hours of these wicked squalls and calms, we decided to make for Granville, some five miles off, and entering the harbour at 6.20 p.m. moored alongside a fishing vessel, as it was low water, thus saving ourselves all the trouble of studying our moorings and the rise and fall of the tide, which here is 44 ft.

Granville is an interesting and historical place, and at one time used to send a large fleet of vessels out to the banks of Newfoundland. It has a basin, which is open at an hour either side of high water, and where large steamers can lie afloat.

On our way in we had seen what we took to be a fine pitch on which to camp, so after dinner, when it was quite dark, we sailed our canoe out of the harbour and across to this supposedly peaceful place, only to find a mass of rocks; but just the other side of two rocks which touched each other at the bottom we could see a snug little spot and thought we would go over them on the top of the swell and camp for the night inside them. Stowing the sails Bill got on the oars and we tried three times to go between the rocks and over their joined bases on the top of the swell, but each time, as we came in fast on the swell, the canoe would be twisted round. After the third attempt, in which we actually hit the rocks, we gave it up and returned to Granville, putting *Brynhild* on one of the slipways for the night, and, pitching our tent, we turned in thankful that we had not damaged her to any extent on the rocks outside.

Tuesday, June 23. We were up at 8.00 a.m., and after breakfast left Granville at 10.00 a.m. The wind was light and N.W., and we steered S.W.½W., sailing along at some 4 knots. The reasons for keeping to the S. of our true course were: (1) *Brynhild* sailed fast this way, and (2) as far as we could make out the tide was at this time drawing N. out of the bay of Mt. Saint Michel. However, at 11.00 a.m. we altered our course to W.S.W.; Granville was some four miles astern, and it seemed that the tide had no effect upon us at all. By 12.40 p.m. we had the La Fille lighthouse abeam, so our speed was actually four knots over the ground. The wind was N.N.W., and here we started on our course inside the rocks that guard the approach to St. Malo on all sides. They looked pretty forbidding on the chart, but the way through was not so difficult as we had imagined, though the sorting out of the different headlands was a bit of a problem, which we solved by looking at our speed and the time and saying, 'We are here, so that point must be Meinga and this one must be Pt. de la Varde.'

It was now practically low water, so all the rocks stood up higher. At 3.00 p.m. we were right off the fine ancient walled city of St. Malo. The wall is in perfect repair, and the city is entered by different ports or gateways. In days gone by it must have been a remarkably strong place, for the approach from the sea is well guarded by rocks, and it would be a most difficult place to capture. We had sailed the 20 miles from Granville to St. Malo in five hours with dry decks at an average speed of 4 knots, a very comfortable and enjoyable passage, having been able to cook on the way without slowing up the boat at all.

Entering the harbour we sailed up to the slipway used by the Dinard ferry boats. We wandered round the town and visited an interesting museum, in the shape of a Newfoundland fishing schooner such as the French have used for many years. Aboard her we found the fishing dories of the type we had met all along the coast. These French dories are the same as those used on the Gloster schooners, which also fish off the Grand Banks of Newfoundland, and this I think is due to the fact that the French occupied Lower Canada in the seventeenth century, founding Quebec in 1608, and probably introduced their boats, as well as their own word (doris) for them, into that part of the world.

Wednesday, June 24. This day there was a thick fog and visibility at times was only 50 yards, but just the same we decided to leave St. Malo and continue our voyage to the west. 10 o'clock saw us taking our departure from the end of the breakwater which was only 10 yards away. Instead of going out through the fairway we decided to make straight for Cape Frehel some 12 miles away. This course would take us through a great many rocks, but in the fog I thought it was a safer course to take as the tide would be with us, and not on our beam, as it would be going out of the harbour. We had only to steer the different courses without allowing for any tide pushing us abeam, the addition of the speed of the tide to our own speed being our only correction. All went well until suddenly, about 30 yards ahead, the rocks off Le Decolle Point loomed up, and we had to head away from them, otherwise we should have been wrecked, for though there was but little wind, the swells were surging heavily over the rocks, and we should have soon broken up on them. However, we nosed northward and round them, and continued on our way, passing other rocks quite safely without seeing them, the weather still remaining thick. As we approached Cape Frehel we thought it best to go into the Baie de la Frenaey, which from the chart seemed to be free of rocks and fairly easy to approach. So we bore away W.S.W., for close to those rocks off Frehel with the strong tide that would be rushing by them was no place for us with the visibility down to less than 50 yards. As we towed no log our navigation was on estimated speed all the time, and though this sounds a 'happy-go-lucky' method, we were quite good at gauging our speed and were quite confident of making our destination. Continuing on W.S.W., we reckoned we had another 10 minutes to sail before we were inside the outer points of the bay, when suddenly the fog lifted and revealed the land, and there was the Baie de la Frenaey exactly where it should be, just 10 minutes' sail away from us. Visibility being now good, we stood in close hauled for the fort on Point de la Latte, and closing with the land we tacked and continued beating to windward towards Cape Frehel, the wind being W.N.W. At 2.00 p.m. we were off Cape Frehel and stood N. out into the stronger tide, but the wind still staying N.W. and looking like holding there we decided to tack at 3.00 p.m., for by steering W. we could fetch the Ile harbour light and make the harbour of Portrieux. This was an interesting sail; we were weathering the rocks that stand 3 miles off Cape de Ergui and away to leeward the shore was very beautiful, huge rocks, attractive sandy bays with tree-clad hills at the back of them, and we were sailing with quite a smart breeze and sunshine; the day seemed perfect after the thick fog we had experienced earlier.

At 5.00 p.m. we had Petit Legon abeam and outside us, the sea breaking heavily over the rocks, for now there was a good breeze and Bill and I were both sitting out on the end of our slides. Had it not been for the fact that *Brynhild* was jambed upon the wind in order to weather the three mile stretch of rocks outside Portrieux, she would have been travelling very fast; as it was she was doing something like 5 knots, and throwing the spray over both of us. We kept her at it, and quite soon were sailing to leeward of the tower and to windward of the light on the rocks of Ile harbour, and once through these rocks we could ease sheets and sail into Portrieux. The clocks ashore were striking 7.00 p.m. as we came alongside the inner end of the mole. We soon had *Brynhild* moored with anchor off and a line to the top of the quay wall and went ashore for our dinner at the Hotel Commerce, the food as usual being a joy to eat. When we came out we found a huge bonfire on the beach and all the youngsters letting off fireworks, in celebration of the feast of St. John. Amongst the crowd there was 'Fatty', a chap about 15 years of age, who was pear-shaped and full of fun, so just to cheer things on their way Bill and I bought stacks of fireworks and presented them to 'Fatty', keeping a few to drop under his stern so that he would himself have a shock while he was lighting the others. By the end of the performance 'Fatty's' hands were burnt black, one of his legs looked more like a very much overdone piece of beefsteak, and there is no doubt these things must have reminded him on the morrow of the joy he had with the fireworks that night.

It was now practically high water, so we moored the canoe so that she would float at 9.30 a.m. and then pitched our small tent on the sands in front of the Hotel de Ville, turning in at 11.00 p.m.

Thursday, June 25. We had a fine breakfast of fish and left the beach at 10.30 a.m., clearing the harbour 10 minutes later with a fair tide inshore, but with the wind very light and dead ahead. Outside the tide still seemed against us, so we made short tacks along the shore, which was interesting work, Bill standing on the bow when needed to look for the rocks; a very pleasant sail, as we had warm sunshine.

At 11.20 a.m. we were passing inside La Herque tower. It was pleasant sailing amongst the rugged rocks just outside the sandy bays—though every so often one of the bays would be full of huge stones. The small towns and villages as we passed them looked very pretty, with their subdued colouring which blended perfectly with the surrounding scenery.

At 12.30 p.m. we were up with Le Pommier, a fine great rock painted white. After tacking close to weather of this we stood offshore, having passed between it and the rock La Mauve. Standing N. across the bay of Brechech, we met school after school of porpoise; at least we took them to be porpoise, though they were larger than any we had seen before.

At 2.00 p.m. we were sailing just outside Mets de Goclo with Paimpol inside of us, the lighthouse we were passing being on the outer end of a small rocky island. Here we caught up and passed a big trading cutter, as we were sailing about two points closer to the wind and half a knot faster. Tacking on, we sailed outside the Ile de Brehat and continued our way past Les Heaux, a fine lighthouse on the rocks some three miles offshore. We passed inside this, intending to go into Treguier. The wind having now come westerly was still against us, and was quite fresh, and with this to help us we imagined we could make our way over the now adverse tide, for we could lay W.S.W. on the starboard tack, which would take us down inside the rocks where we would ease the tide. With this slashing breeze we were travelling very fast, but the tide being just on our weather bow set us on to a huge ridge of rocks to leeward, which meant a tack offshore towards the rocks out to sea, a tack on which we lost a great deal of ground. It looked like being a struggle before we made our harbour, but it would be worth while, so we battled on, unwilling to turn back and make for the Ile de Brehat, which we had passed some hours earlier. Soon, however, a thick blanket of fog rolling up to windward at a speed of some six miles an hour decided our fate. With the land and rocks blotted out to windward, and it being only a question of time before those to leeward were also enveloped, we turned *Brynhild* round, and with a free wind and tide we were soon back abreast of Les Heaux light. While Bill was laying off the compass course from the different rocks which we had to clear, I was getting the utmost out of *Brynhild*, for we were racing a fog and were more than a little anxious to win the race. Off Les Heaux visibility was reduced to half a mile, with the chance of getting even less quite shortly, and so we rushed on our mad career, past the various rocks and towers, making for the tiny natural harbour of Corderie, which is no more than a bay with a mass of rocks which form a shelter once you are inside. We arrived there safe and sound and soon had our tent ashore ready for the night, though it was low water. Just inside was a stone pier, and we made for the lee of this, tying *Brynhild* up while we went ashore for 10 minutes. Here I met Raymond Schlemmer, a man connected with the Scouts of France, who was most helpful, and directed us to the Hotel Les Décapités, which in spite of its dreadful name produced a first-class dinner. Afterwards we sailed back across the bay of Corderie, and with the help of three fishermen carried *Brynhild* over the rocks and stones to a sandy spot above high water mark, and quite soon had the tent pitched over the boom of the canoe, and the other one ashore for Bill, and after a walk to see the light flashing its warning out to sea we turned in.

Ile de Brehat, standing as it does near a headland, is a useful spot. Being an island one does not have to approach it up a long river, and as it is on a point, it is useful as a starting or finishing point of a passage, and we had hoped to make this from St. Malo, but unfortunately when the wind did come in, it was dead ahead, and so we stood across the bay and made Portrieux some 14 miles to leeward.

As could be seen from the chart there is a channel to the S., and one running in from the N.W., both of which meet at the River Portrieux to the S.W. of Brehat. These channels are well marked, but by going into Corderie we were saved a long sail down the river and also had an easier jumping-off place.

Corderie, at the entrance to the River Portrieux, dries out, but a vessel can anchor in the outer part fairly safely. *Pelias II*, a French ocean racer, is a good guide, for she uses this little haven as her summer base, and her mooring is as far in as one can lie afloat at all states of the tide. The fishermen come farther in as they do not mind grounding. On the south side of the island is Port Clos, and any vessel entering here should be prepared to take the ground, for there does not seem to be any anchorage where one can be afloat in shelter. Both harbours are shown on the chart of Brehat.

Now though Ile de Brehat is surrounded by hundreds of rocks, these very rocks make breakwaters once a vessel is inside and though a dangerous it is also a fascinating place. The island itself is cheerful enough even in bad weather, for it is healthy and clean, and the scenery, though rugged, is ever changing with the enormous rise and fall of the tide, and the different angles of sunlight and even the mist, which hides and then reveals a view adding to its fascination.

Friday, June 26. Brehat seemed well worth staying on, so as the wind was still ahead and quite strong, we decided to spend a day there. The island was a spot on which we could have spent a week quite happily, for it is ideal for camping. It has no roads as we know them, and therefore no cars; the people live by fishing, grazing cattle, and small farming, and though one would imagine it to be a poor place, there was no sign of poverty anywhere. We had lunch with Monsieur Desiré Bocher in his cottage, and though it was old fashioned, the beds being the antiquated type which are let in to the wall very like shelves, he had as well as a large open hearth some 8 or 10 feet wide, a stove which was very like an Aga Cooker, and consumed very little fuel, and in addition a gas stove, supplied by compressed gas in cylinders. It was clear that M. Bocher and his wife lived very comfortably, and we thoroughly enjoyed our meal, and the company of such contented people.

After this we walked over the island to Port Clos, a small harbour on the southern end connected to the mainland by motor boats, and after dinner there wandered back to our tents and sleep.

Saturday, June 27. Between breakfast and lunch we packed our tents and made *Brynhild* ready for sea, and then after lunch set sail at 1.00 p.m. to the west. There was a smart breeze, but as usual it seemed dead ahead, and so we had to tack out to Les Heaux. By starting at this hour we had an early ebb from inside the island to carry us straight northward and round the lighthouse.

After several tacks we weathered the light and stood on towards Le Jument, this buoy being abeam at 2.45

p.m. The tide here was setting us slightly offshore, though it was fair. At 3.15 p.m. we had a black buoy with a square mark on the top abeam, the wind being still ahead but slightly onshore.

At 5.00 p.m. we had Rock Ganyer abeam, some five yards off, the tide still flowing very gently westward, our course into Perros-Guirec being S.W. by W., which we could just lay, and as it seemed we should make this harbour by 7.00 p.m. we stood on inside the huge rocky island called Ile Tome, mooring inside the harbour at 6.45 p.m., the tide being dead low.

We moored our canoe up with an anchor and line on the top of the quay and were soon enjoying a fine dinner, after which we pitched the tent alongside the lifeboat house and turned in.

Sunday, June 28. This day came in with a W. wind, which by noon had turned into N.E., and the change brought with it a fog; but fog or no, a fair wind was too good to miss, and so we set sail at 12.30 p.m. and beat our way out, making short tacks over the rocks on the N. side of the bay, where there was an eddy tide to take us out. Visibility at this time was about half a mile, far enough for us to pick up the different buoys and rocks without much worry. Once clear of Perros Bay we could lay our course across another bay filled with rocks, and at 1.40 p.m. we were off Ile de Hu with a fair tide. We had sailed close in to the rocks all along, and it was most interesting, for this part of the coast was full of deep inlets or bays filled with rocks, and any small boat at high water could wind its way in through them, and find perfect shelter at the far end, or at least so it seemed to us. Though Les

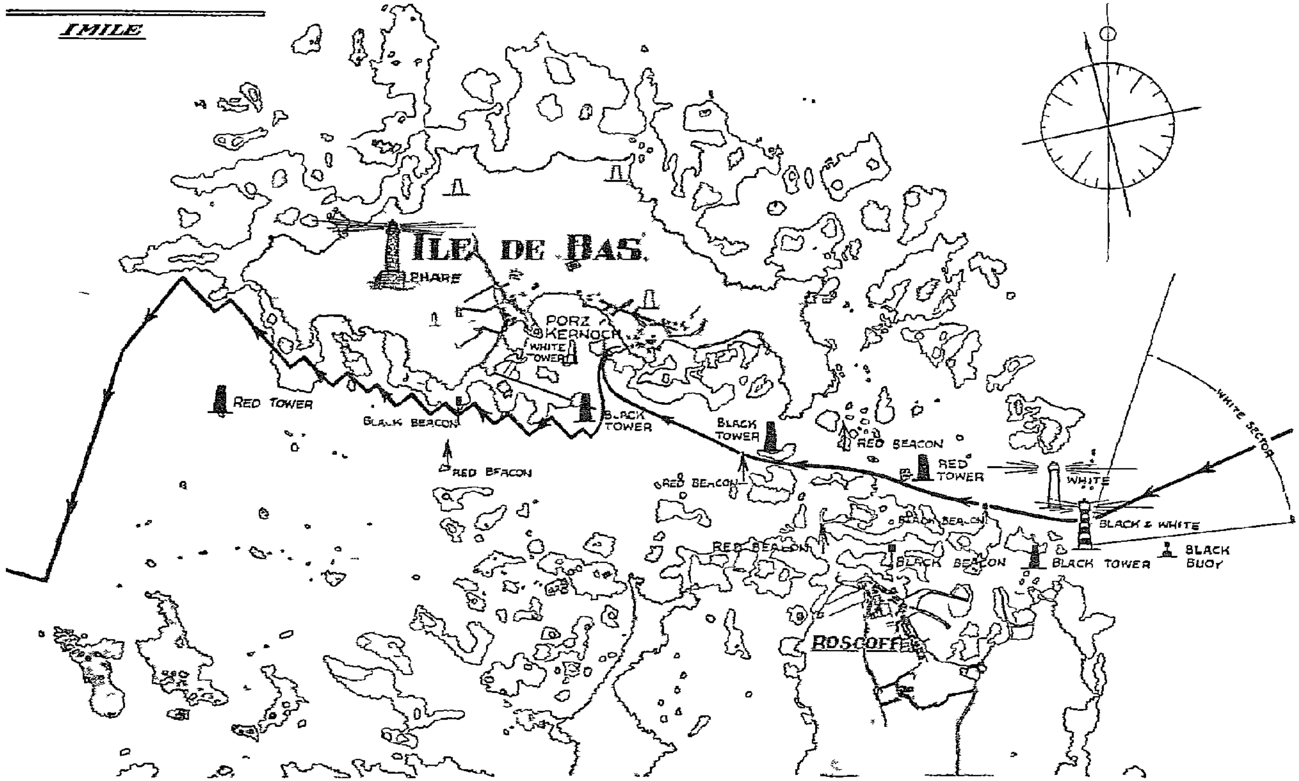
Sept Iles were not far offshore, we saw no sign of them as we passed for they were hidden in the fog. Visibility was sometimes a mile and sometimes not much more than a quarter.

At 2.15 p.m. we reckoned we were abreast of the western end of I'Grande and now the wind and sea were increasing, and we were sailing dead before quite a smart wind with a steep sea running.

At 3.50 p.m. the rocks of Plateau de la Melone were abeam; they had suddenly loomed up out of the fog when less than a quarter of a mile away, and I immediately altered the course a point to give them a good berth in case there were any outlying rocks, for by the chart this Plateau appeared to be 1½ miles wide. As we and they were now some 10 miles offshore, and there was quite a heavy sea breaking over them, it would mean the end if we hit one. A little earlier I had thought it quite possible for the wind to increase enough to cause us to reef even though we were running before it, but it had eased slightly and the sea by now had gone down a bit and was still going down. At 4.25 p.m. the whistle buoy off Les Trepide was abeam. This buoy, which is one of those which gets its energy to whistle or to groan by the rising and falling of the sea, we had heard when some 1½ miles off, even though we were dead to windward, for our little boat made no noise at all, as we had no engine, and there is no doubt these whistle buoys are very fine if sad-sounding jobs.

It was still quite foggy and we were running for a very bad coast, so kept a good look-out for it. At 4.45 p.m. we passed the bell buoy of Le Rater, and though the lighthouses, which are the sentinels of the narrow and rocky channels between Ile de Bas and the mainland at Roscoff, were less than three miles off, they were still hidden in the fog. When we were quite close to them they suddenly loomed up out of the fog, and then we saw the white gleam of the breakers over the rocks all around them, for though the sea and the wind had eased up, there was still quite a heavy surge. We ran on, however, through the lights, and altering the course W.N.W. were soon in the smooth water between Ile de Bas and the mainland; though we were surrounded by rocks we knew that *Brynhild* could dart in amongst them as she wished, and in fifteen minutes we were alongside the causeway of Laux Montons at the eastern end of the harbour of Ile de Bas, from which the ferry (sailing) boats run to Roscoff. The tide was still falling, but here the rise and fall seemed very little, only about 30 feet instead of the 40 we had become used to. We moored *Brynhild* with an anchor and a line ashore, and then went for a stroll over the Ile de Bas with the fog still holding on, and the visibility varying from one mile to a ½ mile, the air being damp and clammy.

Our approach into Ile de Bas and its chart illustrates the buoyage system well. There are two approaches to the harbour, one from the E. and one from the W., through the channel dividing the island from the mainland. Note particularly the change over in the leading marks which this causes. On entering French Harbours or rivers red buoys or towers are left to starboard and black buoys and towers to port. As our track shows we came into Porz Kernoch leaving red towers to starboard, whereas coming out to continue our voyage we left black towers to starboard. Vessels sailing straight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BLACK & WHITE
RED BEACON
BLACK BEACON
BLACK TOWER
BLACK BUOY
ROSCOFF

through this narrow channel, therefore, and not calling at Porz Kernoch, would sail so far through with red towers to starboard and continue the other part of exactly the same channel with black towers to starboard. On coming into the eastern end of the channel, as we did, there is a black and white lighthouse, meaning that it marks the middle ground and can be left on either hand. Such a channel is very confusing till we remember the simple rules governing the French buoyage system: *black buoys are to port entering, red buoys to starboard entering, and black and white horizontal stripes marking middle grounds, which can be left on either hand.* In a channel such as the one between Ile de Bas and the mainland, where there are two approaches to a port, if a little calm thought is given (I use the word calm as small vessels in a big wind and sea entering a rocky and tricky harbour tend to excite those on board, and sometimes an excited brain does not think straight), we quickly realise exactly what the markings mean, for after all they are there to guide and not to bewilder seamen.

This island seemed very poor, the roads being nothing but sandy tracks in which we sunk to our ankles, full of fish heads and bones thrown out of the houses, all of which were built of stone and looked very sturdy, for here, as along the whole of the Brittany coast, there is an abundance of stone with which to build houses and breakwaters, even the gate posts being of stone with holes drilled through them on which to swing the gate. After a look at the lighthouse, a very fine piece of work, we went to the outer edge of the island, and here the sea surging in through the rocks and the damp cold fog made us feel melancholy, so that our walk back to the harbour was quite a sad one, with nothing to brighten us the whole way, the houses and the roads in the dull evening light seeming bent on still further depressing our spirits. Then when we arrived at our hotel for dinner there was nothing to eat; all we could get was an omelette, after which we looked for a clean spot upon the hill to windward of the houses to pitch our tent. Up there we felt more cheerful, for though damp and cold the air seemed better, and we turned in happy and contented.

Monday, June 29. After a breakfast of crab we watched the boats at the quay being loaded with seaweed for the mainland. It seems that the Ile de Bas supplies Roscoff with seaweed for manure. It is gathered at the outer end of the island and brought into the quay by carts and loaded into the sailing boats, which were stacked high with it and had rather the look of a Thames barge with a haystack aboard.

We prepared *Brynhild* for sea, had another omelette and left at 12.25 p.m. with a very light wind, W.N.W., and the last of the flood flowing against us at about one knot. It was not until 1.15 p.m. that we passed to windward of the red tower of Basse Plate, steering W. about one knot, the tide practically finished and about to turn in our favour. Away to the W.S.W. a heavy thunderstorm was working up, and we knew we were in for a squall of wind and rain, so just before it struck us we took the jib off, and reefing the mainsail sailed her through the squall. Our first tack to the southward would not let us clear the rocks to leeward, so when these were about 200 yards away, we tacked and stood westward during the squall, which now settled in to a very strong W. wind right in our teeth. As soon as we could weather Ile Sic we stood to the S. to try and get behind the rocks for shelter, but there was none to be had. Seeing under our lee, inside this island, a fine looking harbour unmarked on any chart we had, and unmentioned, we thought we had a good excuse to explore it, so we bore away a point and soon came up with it, Bill standing on the bow to make sure there were no rocks in our way. Thus we came to the outer end of Mogueric breakwater, just inside the Ile Sic, arriving in the harbour at 3.00 p.m., taking two tacks across to find the best spot on the beach for our canoe, which was close alongside the breakwater, the rest of the beach being dotted by rocks.

We had hardly touched the beach when the whole of the village came down, and in a very few seconds had hauled our canoe up clear of the tide at high water.

It was pleasant to be in this clean little spot, so different from the Ile de Bas, and to see all the animated faces around us, which were in strong contrast to those we had just left. The man who had seen us come in from the end of the breakwater was most excited over our speed and told everyone just how fast the canoe had entered, and I have yet to meet people who can express speed, the roar of the sea, and the whistle of the wind in rigging, by sounds and gestures as vividly as the enthusiastic and excited Bretons.

After dinner at the Ar-Mor Hotel, we had a mixed Breton and British singsong. One man made a speech on the subject of the ancient connection between Grande Bretagne, or Britain, and Petite Bretagne, or Brittany, and altogether it was a most interesting and enjoyable evening. They were quite proud of the fact that Brittany at one time was little Britain.

The place was very busy at low water. Seaweed was collected by horse and wagon and taken inland for manure, while all around women were working in the fields, as were men, while others were unwinding twine, which still others made into nets. Then a little fishing boat would come in, unload her fish, bring her nets ashore, and the nets were then taken by the horse and wagon to some poles where they were dried and mended. We also met a great many onion growers, who within a month would be selling their onions in England; these spoke quite good English.

On the side of most houses was a concrete rain-water tank just as at Ile de Bas, alongside of which was a stone trough for washing clothes, each house it seemed being independent, as far as water was concerned, of the rest of France.

Sitting down this afternoon to study the chart for the next bit of coast, I reflected that perhaps it was just as well that Bill, my companion, was cautious by nature; he had a most valuable steadying influence on me; his not wanting to leave Ormonville in the fog, for example, made me all the more cautious, and his anxiety over making the entrance of the narrow channel between Ile de Bas and the mainland had also a sobering effect. Here we were much as we had been many years ago, when I was Scout Master and he Assistant Scout Master of the Cowes Sea Scouts, I wanting to push on in spite of everything and Bill all the while steadying me down. Caution and steadiness are essential amongst all these rocks, especially in thick weather or if a sea is running.

Tuesday, June 30. This day, as yesterday, brought with it a very strong wind; indeed it had held all through the night, blowing with great force and showing no sign of easing. As we lunched at the hotel it howled and shrieked round the house, and it did not seem much of a day to go to sea, for it was still ahead. But we had seen and enjoyed this little harbour, and it was time for us to explore another, so at 3.30 p.m. we left Mogueric with the mainsail reefed well down and the jib set, and quite soon we were clear of the protective barrier of rocks and flying through the seas.

Here and there we could work inside rocks and did so, for outside we were going too fast to be comfortable against the seas running. After making four miles good to windward we took the jib off her in a heavy squall, and after another mile went into a tiny rocky cove at the eastern end of Kernic bay to stretch our legs ashore and have a breather. Here were some labourers weeding a field, and they told me the name of the place was Groule, though as there were very few houses there, it was not marked on any of our charts.

After a five minute run ashore we once more set sail, and were soon out clear of the rocks in the steep seas running, beating to windward under mainsail only, but before long we were able to get inside the rocks again and sail in fairly smooth water, Bill standing up on his sliding seat whenever things looked dangerous, for from this height he could see how much water there was over the rocks below the surface.

We beat our way along the coast in round Kernic bay, and at 6.15 p.m. we were abreast a dear little harbour with a breakwater protecting its fleet of small fishing boats inside. Though we should have liked to look this over, we were contented with taking a photograph of it; and continued on our way across the bay, working in the lee of the rocks whenever possible. Finally, at 7.10 p.m., we were sailing due S. on the starboard tack to windward of the black tower of Pontusval, and were soon inside the rockbound bay.

It was almost low tide, so we hauled *Brynhild* ashore and took our anchor as far as its warp would allow us, then changed our clothes and walked up to the Hotel de Bains at Brignogan to dinner, a very fine meal.

To enter Pontusval bay we kept the white tower on the shore in line with the windmill tower on the hill. Practically every harbour on that coast has leading marks. The French use a mill, a church or some other conspicuous building for one, and then put a white tower on the beach to line up with it which leads the way in, as this saves the expense of one leading mark. Once a white tower is seen on the shore, common sense tells which of the surrounding buildings should be in line with it, even if one has no chart.

Wednesday, July 1. This day the wind blew very hard and there was a great deal of rain, so we were content to stay at Pontusval where we found we had pitched our tent on the local rope walk.

The following letter to my friend, the Editor of *Yachting Monthly*, tells the story of rope making there:

CANOE *Brynhild*,
PONTUSVAL,
BRITTANY, *July* 1, 1936.

To MAURICE GRIFFITHS, ESQ.

MY DEAR MAURICE,

We sailed into this tiny harbour through the rocks which form it last night at 7.10 p.m. after a hard thrash to windward, the seas making an inspiring picture as they broke around and over the outlying rocks, the breaking water standing out pure white against the dark rocks and the low grey driving clouds, all of which, once we were inside, made this seem a snug rather than a forbidding harbour.

After dinner we pitched our tent ashore and woke this morning to find that we'd chosen the centre of the local ropewalk for our camp site, as three fishermen brought their ropemaking gear from behind a bush and started in to make ropes. We have no records to tell us of the beginning of rope-making, but we do know that from his earliest days man has had something to serve him for ropes and cords, using strips of hide, pliant reeds and withies or the hairs of animals, twisting them together to make his rope strong and long enough; and here before our eyes were three fishermen about to make a rope with the materials and methods used by their forefathers before Christ's time. Watching them, it was easy to imagine them to be members of some savage tribe in any part of the world, for every race on earth has made ropes from the beginning of time with just such materials and methods.

Our own ropes are made of fibres, hemp or cotton, which are combed so that they lay parallel to each other and are then twisted into a yarn, two or more yarns being twisted to form the strand, and then three or four of these are twisted together to make a three or four strand rope. These chaps, however, were using rushes or reeds, and so their rope only went through two processes, the twisting of the reeds into a strand and the twisting or laying of these two together to form the two stranded rope. First of all they set up their double rope winch which twisted up the two strands, in its usual hole, then they took the single and travelling rope winch to a spot some 30 fathoms away when the youngest of the three turned the two winches which were to twist the rushes into strands in a clockwise direction, these winches or whirlers being nothing more than pieces of iron bent to form a handle one side and a hook the other side of the wooden stretcher-like affair which held them. On the hooks the two elder men fastened some half a dozen reeds, and holding these with their left hands so that the ends could not revolve, they caused the hooks to put the twist into them which would by friction cause them to bind and hold together. Each man had a bundle of rushes between his legs, and from this bundle they took two or three reeds at a time and, inserting them in the middle of those twisted up, they steadily worked and walked backward away from the winches, their strands growing longer all the while. It was fun to watch them, for they had to walk cross legged to hold their rushes in place. When their strands were about 30 fathoms long they joined them together, the bight was put over the hook of the single travelling winch, and all was ready to form the two strands into a two stranded rope.

One of the two who had walked along to make one strand manned this winch, while the other took a flat piece of wood pointed at one end, about 6 in. by 3 in., with a groove in each edge to fit the strands, and fitting a strand in each groove he started to walk towards the double winch. All the while the single winch was being turned in an anti-clockwise direction, while the double winches with a strand on each were being turned clockwise in order to keep the turns in the strands as otherwise they would come out. And so in effect both sets of winches were revolving in the same direction (they were facing each other); the two strands were soon twisted into a double stranded rope, and once the third man reached the double winches the rope was made, except for his tucking the two strands in together, so locking the ends. Then the two sturdy fishermen who had made the rope held either end, and after a tug of war to stretch and test their rope, coiled it down and they were ready for sea. With rushes and the simplest of gear they had made a rope 30 fathoms long in about 15 minutes, and more than that, they had brought home to us the value of independence. This rope had cost them nothing excepting their labour, yet it was strong enough to stand all these two could put on it, and it seemed that because of their independence these Breton fishermen must be happy, for had they lived in a big town they would have been helpless, and would have had to go into a shop to buy their rope instead of making it themselves.

During our two weeks of cruising along this rock-bound coast we have seen these fishermen at work on land and at sea. Because our canoe is small we've seen more of them than we would have otherwise, and there is no doubt they are as fine a set of seamen as one could wish to see.

Best wishes,
Yours sincerely,
UFFA.

The time had now come for us to return to England and work, and so we laid *Brynhild* up in the cellar of the Hotel des Bains amongst the champagne and wine, and returned home by train and steamer *via* St. Malo.

Brynhild had taken us safely across Channel along the rocky coasts of Normandy and Brittany, through strong tides and winds, calms and fogs, and had enabled us to see a great many things a larger vessel would have been unable to, for she made us dependent on the land, so that we saw far more of the coast itself than we should have in any other type of vessel. When we landed the villagers came down to meet us, and seeing how small our boat was, admired her performance, and helped us carry her above high water mark. They could see at once everything we had, for after all, our gear was very simple, two tents, two eiderdown sleeping bags, change of clothes and two days' food. So knowing all about us, the fisher folk and people with whom we came into contact did not feel backward or shy, and took us to their homes and hearts, as they could not have done had we a larger boat. We saw many new sights, old fashioned houses with beds like the bunks one finds aboard Norwegian pilot cutters, very old open hearths, and we chummed up with fishermen, farmers, schoolmasters, lawyers, and almost every trade along the coast. All of this made our voyage most interesting; we saw many unusual sights, such as a cow with her painter coiled round her horns where it was out of the way, and yet ready for the owner to lead her home by directly the night set in. We saw little fishing boats built out in the open, blacksmiths at work at their forges, fishermen making ropes out of rushes in the open on the shore, and so we received a clear cut impression of the folk who live along these coasts.

Chapter VII

THE SAILING SHIP OF THE FUTURE

(*A DREAM*)

It was a bright clear January afternoon; the wind had swung into the north-west and was blowing fresh and crisply, as I walked along under the walls of the Squadron's Castle at Cowes, wrapped in thought.

Suddenly I started, for though there was no one in sight, a kindly voice said, 'The very man we wished to see!' and went on, 'Don't be startled. Would you like to work out a design that will enable the sailing ship to flourish again on the sea?'

My thoughts had been exploring such an idea; so, though bewildered, I answered, 'Yes, with all my heart.'

The voice then said, 'Do you see two spots before your eyes?' (I did and thought it was liver.) 'Stretch out your hands and put these on as though they were glasses.'

I did as the voice told me, and the spots disappeared when close to my face; but they gave me eyes to see with, and I saw standing before me the Earl of Yarborough, the first Commodore of the Royal Yacht Squadron, and with him the Earl of Belfast who had succeeded him, both famous men a hundred years ago, and owners of two notable vessels, *Falcon* and *Water-*

witch. They chuckled with enjoyment at my astonishment when I saw them, and then said, 'Come along.'

Off we went at once, walking along the front of Cowes towards Egypt Point, past the Green, and yarning as fast we could; for the last hundred years had brought great changes on sea and land. These years had seen engines developed to such a state of perfection that they ousted sail from the seven seas and horses from the fields and highways, until the only thing that preserved either was man's love of sport, which caused him to build sailing vessels to cruise and race in, and to breed horses on which to race and hunt.

The afternoon was perfect; not a soul in sight, and the Solent Sea sparkling in the bright sunlight that goes with a north-westerly wind. The New Forest, even in winter, gave the Hampshire coast a well-clothed look, while along the Cowes front the leafless trees made a tracery more beautiful than any lace.

As we came to the small triangular green, I was surprised to see four fine horses harnessed to a chariot that was slung low between two high and light wheels, with an open back. But what was most striking, the horses had large wings extending from their shoulders, and smaller ones from their legs at the fetlocks. These wings folded like a duck's foot; all this could be seen at a glance, for they stretched and contracted them, as if impatient to be off, all the while we approached.

Beyond, towards Egypt Point, a man and his dog appeared. Belfast whispered, 'Stand still and watch.'

First the terrier came along, with his tail in the air and wagging. But, as he approached the horses, it dropped and the hairs bristled on his back, and he swerved aside with his tail tucked between his legs.

Once past the horses he brightened, and again his tail wagged and stuck proudly up, and when abreast the three of us he paused, sniffing the air and wagging his tail: all to no purpose, for I was restrained as I stooped to pat and scratch his back. Then the man walked past the horses without a sign; but when he came to us he frowned, and as he passed us shuddered, as though a trickle of cold water had run down his back. But once fairly past us, he went on whistling and swinging his stick as before.

Yarborough said, 'Neither saw us or my horses, yet the dog sensed both the horses and us, and was afraid of the horses and pleased at us, while the man, more civilised, did not feel the horses but felt and knew of our presence.'

So we three went on towards the chariot, and climbed into it, while I pondered over our effect on the man and his dog, for I realised that I was invisible to man.

'We are bound to what you call heaven, which we think of as home,' said Belfast, and away we went with the horses at the gallop, rushing into the wind's eye, the outside horse kicking down two small posts, for he tipped the rails at the green's edge, as we left on our silent flight. As the horses' legs went forward the smaller wings folded and closed, spreading as they struck backwards at the air, while the larger wings from their shoulders remained extended all the while.

We gained height rapidly, and made our way down Channel towards the open Atlantic at a great pace, rising all the while, so that by the time we had reached the Lizard the earth was a long way beneath us, and only visible for short intervals between clouds. We were so high that the whole of the Atlantic, north and south, could be seen, Africa and America being plainly visible: and I found that by concentrating on one spot of the earth it could be brought very close; my eyes could either see the whole portion of the globe turned towards us faintly, or a small part very clearly and distinctly. Just as I discovered this, and was about to concentrate on Long Island in America, Yarborough said, 'We have now reached the limit of your endurance. Lie down in the protection of the chariot, for you will not be able to stand the speed at which we are now going to travel.' So I lay down, and slept. The last impression I had was that of bursting through cloud after cloud.

Then I awoke, and before us spread a warm, pleasant land with a sufficient number of trees on the level greens to take away any idea of bareness, and we landed very gently, though still travelling fast. Our team of horses seemed to feel they were home, for they galloped over the country at a great pace, with all their wings folded now. This caused me to wonder about wings, so I said to my companions and friends: 'Shall I look out of place and conspicuous in heaven without wings?'

'Not at all,' they said. 'We only wear ours on State occasions or to visit the earth and other planets, just as our horses do.'

Soon we came to a desolate valley, of barren rock with high steep hills on either hand, and in this valley were damp and cold mists, which were very oppressive. This was not my idea of heaven at all.

'Happiness and sorrow are nothing at all, they are only contrasts,' said Belfast. 'For just as you must be hungry to enjoy a meal, you must have sorrow to enjoy happiness, and so we have contrasts here just as you have on earth.'

Even though I knew we should come out of the valley just as day follows night, I was depressed by it, so that when we suddenly came out into beautiful green country, and beheld in front a wall two hundred and fifty feet high with a great wide open gate in it, I could not restrain a whoop of joy, which made my friends laugh aloud, for they too felt the exhilaration. So we joyfully approached this wide open gateway and as we swung through I had just time to see that the gate was of pearl, and that though it was a gate with hinges, it could not be closed, for a beautiful lodge held it open. It seemed to be hinged there as a sign only, that you were either entering or leaving, that all who would might enter or leave if they so wished.

We were now in a very pleasant wood, which, though shady, was not dark; for a soft, subdued light filtered through the trees overhead.

As we drove on we saw a great number of people wandering about, happy and contented. These, Belfast explained, had only just left the earth, and would stay in this pleasant wood a little time, learning the art of contentedly doing whatever they wished to (providing it did not harm anyone), without worrying or fretting that they would have to pay dearly later for enjoying themselves.

After a long and pleasant drive through the wood, we suddenly came out and before us, on our right, lay a sea sparkling and dancing to the tune of a steady breeze. As we skirted the edge we saw many sailing vessels, and also rowing and paddling ships, some of enormous size and speed. But the crudest were simply logs of wood, with sometimes as many as twenty men sitting astride and paddling with branches flattened.

Yarborough said, 'It's fine having you with us, for now we get all the fun of taking a kid to a circus, or running his toy train for him. This place is most interesting, for generally speaking, everyone here enjoys the age and civilisation he lived in on earth, and so we have the history of our earth being enacted by our ancestors from the very beginning. The reason is not far to seek. Beauty, music, in fact everything, is a matter of education; unless the tune is similar to one we know, we do not admire it the first time we hear it, and it is not until we have learnt it and become familiar with it that we love it, this being the reason that old tunes and old friends are best; we know and love them, and so it is that here nine out of ten who come do, and enjoy doing, the things they did on earth. The odd ones, not content with the present, live in the future, and they are at present at work on two problems. One is: Should heaven be altered for future generations' enjoyment? For at the moment we have no machinery here of any kind, and it is thought that engineers may not enjoy themselves here unless they have some machinery. The other problem they have before them is that of the earth's resources; coal, oils, petrol, trees, metals cannot last for ever, and these are being extracted and used in increasing quantities as the years go on. Now, though it is never dark here, we get a soft twilight effect for eight hours every day, similar to the summer nights of the northern part of the Baltic. This we call night, and sleep during that time. But to-night there is a conference between those engaged in the future problem of the earth, and if you'd like to attend we will take you, for those interested may listen. You will have to wear our rig, which is equivalent to a dinner jacket on earth, and this I can borrow, for Belfast and I will probably be the only ones to go from our group of friends.' They both knew that I should like to attend before they suggested it, so there was no need for me to answer, and I devoted my attention to the numerous craft, the seashore and the perfection of the day.

Finally, from a height, we sighted a shipyard some thirty-five miles away, and Yarborough said, 'That is my shipyard. I find that running a shipyard gives me greater joy than anything else, and so there I build ships for any who care for them, the type of ships I build being from 1834 onwards; for though we enjoy most of all our own periods, we cannot enjoy building backwards, yet we can enjoy building to newer ideas. The idea now is that you attend this conference, and then design a ship for Lord Belfast that will compare favourably with the steamships of the day. The three of us will be responsible for her; you for the design, I for the build, and Belfast for the first idea, the ownership and the sailing of her. When you have listened to this conference you will agree that Belfast's idea will be of great service to the earth in the years to come.'

We soon came to the shipyard, and I was introduced to its wonders. The whole of the yard was built in. It was straight along the seashore, and the roof curved upwards from the ends, where it was 30 ft. high to one mile high in the centre, which was ten miles from either end, as the yard extended twenty miles along the seashore. It was curved in plan view also, being

250 ft. wide at the ends, and five miles wide in its centre. The ends, sides and roof were covered with a yellow metal that was transparent, and the framework, cradles, runways and everything forming the building was of this same metal, which I saw was gold, but a lighter and stronger form of gold than our own.

Yarborough said, 'The reason the yard is this shape, is that we find a vessel has five stages in its building life, and we have made the yard so that the ship can proceed through each of its stages from its design until it is launched complete in every detail, and sail straight away from the slipway. A space as large as the ship is occupied by the designer's offices; next comes the mould loft and angle shop, and you will notice that the loftsman scribes in all his lines on a metal floor, which is lowered into the angle shop. Here the frame benders, plate stretchers and shapers, blacksmiths and such men make every part of the vessel off the full size plans. The next stage is the building or assembling of the ship; and here every bit of metal work is completed, so that we never have metal and wood workers together. When the metal workers have finished, the ship is launched into the next shop, and there the shipwrights lay the decks, and the joiners fit the interior accommodation and deck houses. She is next slid into the spar shop, where her masts and spars have been made, and here they are stepped and the riggers set up the rigging. Now she enters her final shop, where she is painted and polished. When this is done the sails are bent, and she is ready to be launched and to sail away. So the pencil lines, which are lightest, are made farthest from the sea, and gradually, as the ship gets heavier and more complete, she proceeds towards the sea on a floor that is level until she reaches the painting and finishing shop, where the floor is inclined one in twelve. The largest ship we could build with this ideal method is one a mile long. So far we have not built anything longer than ¼ mile in length, so you see we use the five-mile centre bay as a golf and race course, and those on either side for cricket, football and such games. You will notice that we have never roofed over the centre bays yet. We shall not do that until we get a ship large enough to build in there.

'But you must see about your rig-out for this meeting. We'll go into the designing office and get a set of gear. Whatever you do, do not get a halo on the large size, as they are uncomfortable if they fit down on your ears, and the larger they are the heavier.'

Inside the office Yarborough called out, 'Can anyone fit this chap out with a set of gear for to-night's futuristic meeting?'

A chap came along just my size, and said, 'Take my outfit, and leave it in here when you're finished, it's on that peg there, number seven.'

So I was soon tricked out with a small halo, a pair of wings for my ankles and wrists and another larger pair for my shoulder blades, and these with a trumpet completed my attire, for, as they said, I had no need for a palm branch as it would be cool and only those taking part in the discussion would get warm enough to want to fan themselves.

Soon we were under way for the meeting, the three of us in the same chariot once more. Our course now took us inland away from the sea, and before long we saw a large walled city. The walls, however, were only twenty feet high, and had archways in them nine feet high, so that the gates were lifted inside the walls, where they took up the remaining eleven feet, and could be dropped by pulling a small lever. On going through we had to leave our chariot in some stables to our left, and walk to the hall for the meeting. For this was a city of thinkers, and no one could travel in it unless he walked, because then there was no danger of being knocked down, and a man could think out his problems quietly and easily by putting all his brain into them.

The approach to the hall was magnificent. We had to climb some eighty wide steps to reach the highly arched doorway, and once inside we looked down about fifty feet to the speaker's platform. The reason for this form of hall, I was told, was that if the speakers saw their audience above them it inspired them, and the listeners, by being above the speakers, felt lifted up, and so such a hall was better for everyone.

Quite soon after we arrived, one of the speakers raised his trumpet, while another (a lady) tautened up the strings of her harp, and soon we were all playing a cheerful tune, the ladies singing, while we males could not sing without stopping our trumpet blowing, though those of us who sang better than we played on the trumpet soon sang instead. And then we sat down to listen to the debate.

On the board we read two subjects:

'How long will the earth's minerals and oils last at the present increasing rate of their usage?'

And

'Should heaven be mechanised, if yes, partly or wholly?'

For it was felt by the thinkers that the two questions were closely connected, since, if the earth's fuels were to be short lived, there would be no need for a mechanical heaven, as the engineers would still live the simple natural life they now lived, and be content with a heaven without engines that made noises and smells.

'Practically everyone present is an enchantress or enchanter,' whispered Belfast to me. 'Only two will speak to-night, the rest will not even ask questions, but will carefully consider all that is said, and tomorrow those with strong views will present them to the diviners, or, as you would call it, the committee, but here we never have a committee of more than five, and of these only three are allowed to speak at any one meeting.'

We settled into our easy and comfortable chairs, which altered shape, height, and breadth to suit each one when sat in, and the enchanter on the speaker's platform stood, and after a flourish on his trumpet, cleared his throat, while everyone present lifted trumpet or harp and with one accord played a short tune, full of welcome, gratitude and encouragement to the speaker. The flutter of his wings showed that he appreciated it, while the expression on his face was a sign that it inspired him. And so with a slight bow he began.

'It is nearly 3,000 years since I first became an enchanter, and a great deal of that time I have spent as a diviner, having resigned that higher position now in order to give myself more time to study the subject before us, as well as the opportunity of speaking on it. Because the earth we left is three parts water, and because water both divides and unites the different countries, we have here always used the language of the country that is mistress of the seas. For the last 220 years, therefore, I have spoken to you all in English, a foreign language to me.'

Here Yarborough whispered, 'That is the poet Homer.'

'Previously we have spoken in the language of the Greeks, Romans, Portuguese and Spaniards, as these have risen and fallen, for a nation rises or falls by her power on the sea, and it is our law that the language used is that of the rulers of the seas below. In all that time we have never had such a serious problem, for though the first question is not in itself serious, since it would prove a blessing to the peoples of the earth if the power they obtain from minerals and gases were to cease, we have, running hand in hand with it, the second question we are to consider this evening.

'We who have watched and studied the earth's ways for such a long time have always been astonished at the shortsightedness of its inhabitants. We have seen them hunt the sperm whale till it is practically extinct, we have seen them almost denude the earth of trees. They have no thought of what they do until it is too late, the sun and rain on which their very existence depends is out of their control, and in ours, which is fortunate for them, and I am pleased to be allowed to tell you that the sun, moon, rain, dew, and the four winds will continue for ever.' Here a delighted flourish of trumpets and harps.

'So the earth will survive and the peoples of the earth, of that we are sure, because the vital things are not within their power, or controlled by them in any way.

'The peoples of the earth are uncertain and changeable, so that it is difficult to foresee what they will do, so much so that we in our divining are only right seven times out of ten. Therefore when you hear my opinion you must remember that it is possible for it to be wrong, though it is probably right.

'In the year 3,500, one thousand one hundred and fifteen years hence, the earth will revert to wind and water for its power. For by that time the oils and minerals giving energy will have become practically exhausted; vehicles will, with increasing years, use less and less fuel for the same result, but they will have increased so in numbers that the fuel consumption will have reached a total beyond the dreams of those on earth. New fuels will be found, and new types of engines, until finally every power-producing element of the earth will be exhausted, except the never failing winds.

'England will be divided into several islands, for the search of coal and oil will so undermine parts of that country that the sea will break through and deep water channels will be formed where mines now exist, since the coal and oil taken out goes away into the atmosphere as a gas, never to be renewed or replaced. Other countries will suffer earthquakes and volcanoes, and though engineers and scientists will try, and will partly succeed in utilising the energy stored in the molten and gaseous state of the earth's centre, this will prove so fatal to man and the land he loves, that a few heavy lessons will put an end to all efforts to take from the earth things that cannot be replaced.

'By this time one language will be spoken all over the earth, and each country will send one or more members to a governing body which will control the actions of the whole world, though it will take another 1,000 years before the peoples of the earth realise that their present folly of not looking ahead for more than one hundred years will result in the destruction of the earth and all that therein is.'

The blaze of light on the trumpets and harps as they played their thankful tune was very brilliant, for every eye was lightened and the expressions were more eloquent than words, all expressing approval and gratitude to the speaker.

Then the second speaker, the enchantress, stood and bowed, while the trumpets and harps played her welcome, but this time a softer and kinder tune was used.

'This is Sibylla of Troy, the writer of the nine Books of Wisdom,' whispered Yarborough.

'From the very beginning,' she said, 'the happiness of man has depended upon woman, and so it is natural that the second problem of to-night should have been put in the hands of an enchantress and not an enchanter. Our duty is to see that every one who comes here is happy, and is able to enjoy eternity, which is a considerable time, without feeling any regrets. So far the engineers who have come here have really enjoyed themselves, designing and building bridges, making roads that never wear or jar, because they have had to work with their hands and brain alone. Future engineers, however, will have far greater knowledge. They will have done nothing on earth except design and run engines of all sorts, and their brains will not understand or appreciate anything that is not mechanical, they will hardly have seen a tree, a green field, or bird, or animal of any sort; that is, if the present rate of mechanical development on earth is maintained. And it will probably be increased.

'Now, in a thousand years' time we shall have such men coming here; but as the fuels of the earth will only last 1,115 years, and as such a short period will not alter mankind's brain one iota, these people will be quite happy to enjoy the natural state of heaven for, in spite of never having seen a tree or green field, the love of it will be inherited, and in their bones.

'So I decide that no part of heaven shall be mechanised, but it shall remain as it is, but that the question be carefully considered again one thousand years from to-day, when we shall have a few more facts and figures before us, though very little can happen in such a short space of time.'

Trumpets and harps were so blown and twanged, that I marvelled the players did not burst or cut their fingers off on the strings; but in spite of the deafening power, the music was very tuneful, and showed how pleased everyone was that the earth and its people would remain normal, for everyone had feared that a change would have to be made if heaven were to be a happy place for peoples of the future.

The lecture hall slowly emptied, but groups of threes and fours still sat in their chairs, thinking and yarning as we did.

Yarborough led off by saying:

'You probably understand our feelings over the decline of sailing ships. We have left the earth about one hundred years only. When we left, because sailing ships ruled the seas, we in the Royal Yacht Squadron were able to lead the way in design and construction. In this short span of one hundred years machines have driven sail off the seven seas, just as they have driven horses and pedestrians off the roads; the farm worker, when ploughing, walked about thirty miles a day behind heavy horses, now he sits behind an engine.

'We are not so much concerned with sailing yachts, for these are increasing in numbers as well as in sailing ability; but we do feel very sad at the steady decline in working ships that sail. Even fishing fleets are using engines instead of sail at an ever increasing rate, so that within a very few years only pleasure vessels will keep alive the art of sailing—till the time comes when all the power that can be has been extracted from the earth.'

Belfast, his voice brimming with enthusiasm, said, 'Though most of us here can see into the future, we are so steeped in tradition that we would like you to design a ship which I shall own, and Yarborough build. What I want is a sailing ship that will beat the steam and oil ships of the present day. They have now reached practically the height of their development, and I should love to beat them at the peak of their power, for, if you remember, I beat the ten-gun brigs when they had reached what was considered perfection.'

I said, 'I see you have altered very little as far as energy and vigour is concerned.'

'No one here would like me to,' said Belfast, 'and now I'm away to bed. A gentle sleep every night is good for me as it quietly and naturally replaces the energy I burn up during the day.'

So we wandered out of the hall and through the streets, to the gate where our chariot and horses were waiting, and soon we were in Yarborough's home, near the sea and the shipyard, for the night's rest.

Next morning we three walked to the shipyard, a mile and a half from Yarborough's home, and as we quietly strolled along we discussed the leading dimensions of the ship we were to build.

'Generally speaking,' I said, 'the speed of a sailing ship close hauled is the square root of her water-line, while off the wind she can be driven 50 per cent. faster than this. The speed of an Atlantic liner is about the square root of her l.w.l., in other words, no faster than a sailing ship of the same length close hauled; so, as these are the chaps we are after, we can build our vessel smaller and obtain the same speed, without any vibration or discomfort to those on board at all.'

'But surely power vessels do sometimes exceed the square root of their water-lines?' asked Belfast.

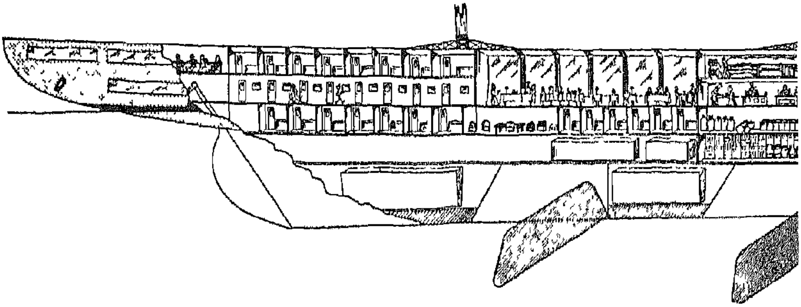
To which I could only answer, 'Yes. Our naval destroyers do exceed this speed, and so do racing hydroplanes; but we cannot hope to compete with these, neither do we have to, for such speed is only obtained at great cost, in machinery, space and fuel. It is no use commercially whatever; they are an expensive luxury only.'

'It would appear that length is speed, from your statement,' said Yarborough. 'What length do you propose to build this ship? The reason I ask is so that I can give you the best sized section in the building shed.'

'The following lengths give these speeds,' I replied. '576 ft. water-line will give us 24 knots close hauled, 484 ft. will give us 22 knots on a wind and 33 knots off it, while a 400 ft. water-line will give 20 knots close hauled and 30 knots reaching.' And I added, 'I'm in favour of the 400 ft. water-line ship, because her spars and sails will be smaller, and easier to make and handle.'

'That is not fast enough for me,' said Belfast. 'The French are under way with a ship that will do 32 knots, I know, so though the 400 ft. vessel would beat anything at present crossing the Atlantic, it would be a waste of energy to build a ship unable to defeat *Normandie*. Therefore let us go for the 576 ft. water-line vessel.'

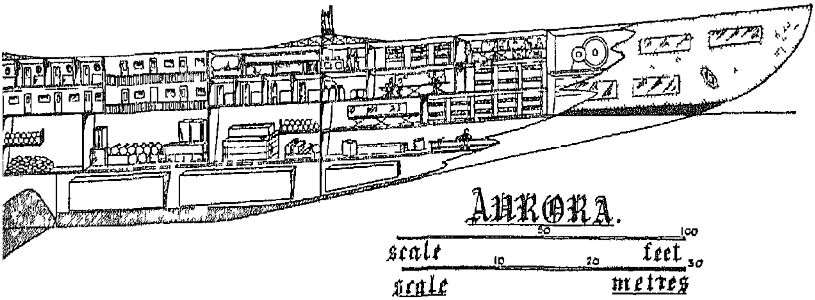
'As the third man, I choose the medium sized ship,' said Yarborough very slowly. 'We can complete her



in time to race the *Normandie* across the Atlantic and back. We shall only just have time; we could not build a larger vessel in the time we have, and the smaller one would not give us the speed we require. We have a knot in hand, and the four angels controlling the four winds of heaven have said that they would help us all they can on our maiden voyage across the Atlantic and home to Cowes. So let us settle on 484 ft. water-line. The vibration will prevent *Normandie* going all out all the while, and while our wind is uncertain to an extent, in spite of the four angels helping us, the same applies to their engines, for they will be untried.'

So we decided on the 484 ft. water-line, with a speed of 22 knots close hauled and 33 reaching, and as we thought 40 ft. of overhang each end would enable us to give easy and fair endings to the lines, we fixed on an overall length of 564 ft., all this being decided as we made our way to the shipyard, so that Yarborough was able to give us the berths most suitable to a 564 ft. ship.

'The overall length means that your five different berths will reach half a mile, so you will be given the long slipway halfway towards the centre—that one there,' said Yarborough, pointing it out as we reached the shipyard.



We walked along to it, and as he approached, the door opened by itself, and we entered a library that was most comfortable, books being arranged round the room on the walls, while the middle of the room was occupied by large tables and chairs. The three of us walked to the long central table, and I saw that it was covered with a transparent cloth, underneath was a glow which threw up faint squares, each an inch in size and divided into tenths.

'We use feet and inches here,' said Yarborough, 'but decimally divided. This table is 50 ft. long, on it you can design your ship one inch to the foot. The roll of tracing linen is never ending; you roll your second layer over the lines and add power to the underlighting so that your squares and lines show through. Then you draw in the construction and later the accommodation plan in the same way, so you know that all three plans cover each other and fit exactly.'

'But I like to do my first design fairly small so that my eye can take it in at one glance,' I said, 'and then, when that is done, work to a larger scale, my first plan in this case being no more than 36 in. in length.'

'Here is a 3 ft. table put in for small plans,' replied Yarborough. 'If you work at $\frac{1}{16}$ in. = 1 ft. you will have a plan 35 in. long.' He then turned a key and each square showing through, turned into $\frac{1}{16}$ in. while numbers showed at intervals to save counting.

'What water can we draw?' asked Belfast. 'The more the happier I'll be, as I want to go to windward.'

'Thirty-six feet is about all that we can draw and enter even the best harbours,' I said. 'But we can fit her with drop keels or centreboards.'

'What about beam to carry sail, double the draught?' suggested Belfast.

Then Yarborough turned a series of dials, marked overall, water-line, draught, beam, until they read the sizes we had chosen, and heavy lines appeared on the under squares, which were spaced exactly right for base and water-lines. But what surprised me was to see the lines at each station square across, dividing the water-line into ten equal parts, each one numbered, and as well as this the tens of feet were marked from the fore end of the water-line, and the feet down from the water-line were also numbered in tens.

With no timid hand Belfast drew in the sheer and the deck line, and then, handing over the pencil to me, said, 'Put in the stem and keel line, buttocks and waterlines, and after that the sections.'

I was amazed to see how easily I drew fair lines without battens or curves, and within a few seconds had drawn in the fore and aft lines, sections and diagonals, without stopping to see if they agreed with each other, for it seemed that they must agree when I could draw such true sweeping lines.

'To spread her sails we must have masts. What height shall we go?' asked Yarborough. 'You will see that 350 ft. above deck takes you to the top of the bench.'

It did, for the bench was designed to take 40 in. wide linen, and so limited the height of our sail plan above deck to 350 ft., which seemed to be high enough to all of us.

'What sort of a rig do you propose?' asked Belfast turning to me.

'On earth the latest rig to prove successful is a wishbone ketch; I'm thinking of a three masted wishbone ketch,' I replied, whacking in spars and sails as I did so, without any thought of how I would get them to stand.

'The outline design is complete, let's sit back and look at it,' said Yarborough. So we three sat back in a very comfortable settee 8 ft. away from the bench, and Yarborough tilted the drawing bench, so that the ship stood upright before us, and we looked at her for faults.

'I see the advantage of the rig,' said Belfast. 'Not a sheet to touch in tacking excepting that jib-topsail forrard, and it looks as though she would sail often without that set.'

'I believe she would,' I replied. 'But the great advantage of the rig is that the topmast stay, running clear over all the sails, need never be touched, and there are no runners or backstays to set up or let go either.'

'But what about dead before the wind?' chimed in Yarborough. 'There's the rub, we'll have to think out something to spread sail dead before the wind. I'd like to show you how this bench works,' he continued. 'Then you can fair up your lines while Belfast and I look over the ways and see who will build this ship.'

He and I walked to the board.

'Your lines, though fair, do not agree with each other,' he remarked, 'for they shiver very slightly here and there. Which do you like most?'

'The buttocks and sections,' I replied.

With that he pressed down three buttons marked sections, buttocks and bowlines, and pulled a lever at the side with his right hand. All the lines now stood above the linen about a sixteenth of an inch, the buttocks and sections remaining the same as drawn, the others altering slightly to conform.

Three sections alone shivered, and Yarborough pulled the lever, and they altered to conform to the other lines.

'Your lines all agree now,' he said with a smile. 'Belfast and I will leave you to alter and satisfy yourself with them. You can alter a diagonal like this, and automatically the other lines alter to agree.' Saying which, he pushed a hollow at a diagonal aft, and immediately there appeared a hollow in the sections, buttocks and water-lines at that place. 'You see how easy it is to fair up on this bench; you see at once the effect of any alteration in shape on every line, and this makes fairing an easy matter.'

He and Belfast went out, and I was left to push the lines about till they pleased my eye. This was very quickly done, and I sat back once more to approve or disapprove of the whole job. It looked very pleasing to me, so I pulled the lever, which locked the lines for ever more.

As though this had been a signal, the door opened, and in came three young men.

'We have come to help you with this design,' said one. 'She is to be started quite soon, and the Earl of Yarborough said you'd be glad of our help; so if you'd explain your ideas of construction, accommodation, and of masting and rigging, we'll set to work right away. Each one of us is a designer, and we each have a fine staff who develop the various details.'

'The three of us, though specialists, understand ships and have a considerable knowledge of them in all their details, but I stick to construction,' said the eldest of the three. 'My name is Michael, and Arthur here,' he added, turning to one of his companions, 'looks after the accommodation of vessels, while George studies the masting and rigging of them.'

'Having used our designing board you have seen how wonderful it is, and how easily we can work up here,' said Michael.

'One thing you must understand from the start,' he continued, 'is that though on earth gold is a scarce and useless metal, here it is plentiful and most useful, for it can be made strong, it can be made light, it can be made transparent, and it can also be made very heavy.' And he went on, 'It can be forged, cast or rolled into any thickness of sheets and any length of sheets we like, also it can be drawn and used for wires, and either welded or riveted. So you see it is a wondrous metal, for besides all this it can be made in varying strengths from 20 to 400 tons per square inch.

'Your hull will be built of this metal entirely; the frames, bulkheads, shell, ballast keel, deck and deck houses, and even the spars and rigging, will be of this metal. In fact, everything that is to withstand strain will have to be made of gold.'

'I am more fortunate,' said Arthur, 'for I still work in wood, which has a power to soothe and charm that metal lacks.'

The four of us sat down and talked the ship over, and we came to the conclusion that she would be welded, as this united all the members of the ship into one solid whole, which would be both rigid and strong, as this metal was so enduring (indeed, it would last for ever).

The scantlings were much lighter than I would have thought possible as far as frames went. The shell thickness we kept at ¾ in., much as it would be for a steel ship. This would save drumming in a sea way; but the frames were just half what they would have been on a steel ship, being made of 6 in. flat strip, and spaced 36 in. apart, the deck beams being the same size.

The keel, which was a gold casting, was wonderfully thought out, for it was rebated at the top where it was to take the garboard plates, and as it was hollow on its upper surface its weight was low. This metal, although it had a 400 tons per square inch strength in its normal state, grew weaker as its weight per cubic foot increased; but even when it reached the density of lead (which we chose for the keel) it was much stronger than any metal used in the construction of ships on earth.

We then studied the rig; for with masts 350 ft. long and in one length, this was a difficult problem to me. I could do nothing more than explain my idea to George, for it was difficult for me to realise that even when lightened, this metal would give 200 tons to the square inch, and be one-third the weight of steel. But this thought, and the knowledge that it could not corrode, encouraged me, so that the tall masts and the staying of them looked quite possible; and though George admitted it was the tallest spar he had ever tackled, he said he had no doubt that by the time the vessel was ready for them, they would have been designed and built.

The accommodation I left entirely to the three young men, so I was now free as far as this design went, for having drawn the lines and explained my ideas to these expert designers, I had nothing more to do than to visit and watch and talk over their work; and by nightfall the design was complete in all its details. Yarborough gave a dinner that night to Belfast, myself, and the three designers, to celebrate the completion of the designing.

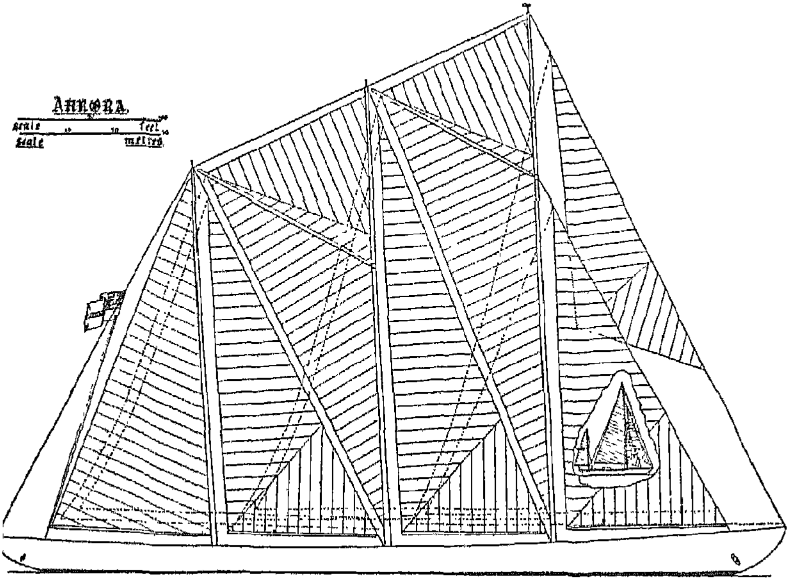
Next morning work started in earnest on the construction of the ship. The loftsman laid her lines down full size, and when he had finished, his mould-loft floor complete was lowered down into the angle shop, where the frames were bent and bulkheads and all other parts of the hull of the ship were made.

As each part was made it was removed into the next compartment where our ship would take shape. This compartment was the building shed, and here was a huge foundry, so the keel was cast on the travelling cradle, and the vessel built up from this, and having seen this happen before, I spent most of my time in watching the process by which the masts and rigging were made, for this was of greater interest to me because of its unusual and novel features.

Of the three masts, the smallest was the first to be made, as by working from the smallest upwards more knowledge and understanding could be gained and applied to the largest and most difficult mast of all.

But although I was prepared to be surprised, the method used for making this mast was unexpected indeed, for I found it was being made in the bottomless pit, which was nothing more than a bottomless fiery furnace. There was no heat at all to be felt above this, for though normally heat rises, this heat did not seem to have the power to do so, and the men could work away immediately above the pit in perfect comfort.

Here was a great cauldron of molten gold, which, the men explained to me, was the lightest then in general use, and had a strength of 200 tons to the square inch. The metal was forced through dies much as water is forced through the nozzle of a fire-hose, the difference being that the dies were solid in the centre, and so only the ring of metal passed through, and this, starting from 4 ft. diameter, could be altered to half this size. The whole thing was worked from a drawing board. As the heel of the mast, which was being extruded first, descended into the pit, an arm traced its way along the plan. Connected to this arm was a pair of pointers, which, following the width and shape of the mast, varied and controlled the width and shape of the dies through which the metal was extruded. Eventually the mast, some 280 ft. in length, was hanging down into the furnace by its cap. This in itself was not remarkable, but to see at the same time smaller dies, through which bar rigging was extruded, and to see these change shape from the lower ends of the rigging, which would be threaded to take an adjusting screw, to the normal diameter, was astonishing. And still more astonishing was it to see these dies grow larger where the shroud or stay joined the mast, and then to see the small die lose itself in the large die through which the mast itself was extruded, as then the metal through the large die blended with this of the smaller while still in its molten shape, and the shroud or stay was joined to the mast while it was still



being extruded through the dies, so that mast, shroud, and all attachments, were made in one and of one metal. The only things needed to complete the mast were the adjusting screws on the ends of the shrouds and the crosstrees; and as the mast in being made was shaped to take the crosstrees and the lugs for the lower ends of the diamond shrouds as it passed through the dies, there was little to do to it except step it. To temper it, it had to stay in the furnace some little time; and now the wisdom of making the mast, starting from the heel, was apparent, for as there was more metal in the heel, this needed a longer time for tempering, and as it went in first and would come out last, it would get this longer time.

The rate the mast was extruded into the pit was regulated right from the start to give the time required for tempering. When the time was up (which was but 15 minutes after the head had been made), the mast was slowly hoisted out by means of a giant pair of sheer-legs. As it came out, men with axes split lugs off the side while the metal was still hot. The axe was put under the lug, and one blow with the hammer cut it free for a certain length, and also bent it to its correct angle with one blow; for the dies through which the mast had been forced had opened to make the lugs required for rigging, and then closed again immediately after, and so it hung in the air, complete except for its adjusting screws.

This mast, the smallest, was no sooner out than another one was made; for a duplicate was required, as one was to be tested to destruction, in order to see what it would stand before the other masts were made. The duplicate was quickly finished, in exactly the same manner as the first, and was hauled out and hung by the side of the other.

The heavenly gold was an air-hardening metal, and it would take a day for the mast to reach its true strength; so nothing was done for a day, excepting that the dies were made ready for the other masts, for all felt confident that the first would be able to stand up to the strain put upon it.

The testing was carried out in quite a simple and practical manner. The shipyard owned a sailing vessel, which was used as a trial ship, and the mast was rigged in her. This was really the mizen mast and would have to support the mizen and mizen staysail, but in the trial ship it was used as a mainmast, for she was rigged as a cutter with the mast amidships. For some three days and nights she was sailed and driven hard, but no sign of weakness or flaw could be detected in the mast. So the other masts were proceeded with without more ado, and were made in the same manner; but the main and fore masts, needing lugs for a gooseneck three-quarters of their height above the deck, were just a little more complicated at this spot. This, however, was overcome without much difficulty, and so the three masts hung side by side in the air, getting stronger as the vessel was built, neither they nor their rigging ever being laid down. For, as was explained to me, trees from their birth to their death stand upright, and are strong this way, and masts should always be upright.

The foreman rigger explained that they had always followed that plan since it was discovered that wooden spars when laid down tended to rot, for the sap could not run out through the heel, and that when they made a wooden mast they rigged the staging round it while it was still growing, and worked and shaped at it that way, fitting crosstrees and rigging while the spar was upright. 'All the sparmakers,' he said, 'are used to this method of working and no other, and have mostly in late years been New York people, who, having lived up and down steps all their lives, seem to enjoy going up and down these stages round masts.'

The months went by very pleasantly. For three hours every morning, from nine till noon, I watched and discussed the various problems met with in the construction and accommodation, and then in the afternoon I often went for a sail, the evenings being devoted to yarning, for yarning is one of man's greatest pleasures.

Quite soon the day dawned which saw the launch of this great ship, complete in every detail. I was pleased to see that she was launched in the old-fashioned way by a couple of dogshores. And so, with her crew of eighty on board, and Yarborough, Belfast, and myself, she with ever increasing speed rushed down the slipway to the water.

Once afloat, the rudder was unlocked, and one of her five ton anchors was dropped while she made sail. This anchor of gold did not have a chain cable, but instead a wire was used, which being made of plaited gold did not kink on being wound up. The entire length of 300 fathoms was wound on to a large winch, the wire having a diameter of two inches and a breaking strain of over 1,000 tons. It was blowing 25 miles an hour, a perfect breeze for trying the new vessel, so all sails were set, except the jib-topsail.

The way given us by launching had carried us less than a quarter of a mile away from the shore, and as the wind was blowing directly on shore this would give a good idea of how much leeway our ship would make before gathering way and clearing the shore. We were soon ready and the anchor was shortened right up. With her headsail to starboard, she was paid away on the starboard tack, the anchor being hoisted up at the same time that her head fell away, for the mizen sheet was slacked off so as to let her fall well off the wind before there was any drive in her mizen. As she fell off she started gathering way, and soon had steerage way, when the headsail was let draw and then the mizen sheeted home. By the time she had gone a quarter of a mile, our new ship was fairly humming along. Having lost a cable to leeward, she was put about and was soon on the other track, though it was surprising to see the speed she lost when tacking. But she soon gathered way again, until she was travelling at some 20 knots, at which speed she had increased the wind speed felt on board from 25 to 40 knots; and though there was no sea to worry such a ship, her speed often caused her to throw a shower of fine spray high into the air as she smoked along, sailing within four points of the wind.

We soon had the land well below the skyline, only the hills behind the coast being visible, and now we tried her with the wind abeam. Setting her enormous reaching headsail, and main and fore balloon wishbonesails, we had her tricked out with practically double the sail area we had used for beating to windward, and her speed increased from 20 to 33 knots, at which speed, with her decks some 2 ft. clear of the water, she seemed to be flying along like an express train, and we were all delighted with her.

We next tried her dead before the wind, with her two balloon wishbonesails boomed out wing and wing, the clews being held out by studding booms, as Belfast called them, or, as I would call them, spinnaker booms. But at this point of sailing, we of course, could go no faster than the wind, which, blowing at about 25 miles an hour, gave us a speed of only some 18 knots; for we lessened the force of the wind as we ran away before it. So in a very few hours we had satisfied ourselves that the ship was fast to windward, came up to our expectations in reaching, and gave a fine performance running dead before the wind. And as she needed only a crew of eighty to work her, she satisfied us on that account.

It was decided that without any alterations at all she could visit the earth, and try her paces against the fast steamers running between Europe and North America.

There was a new steamer coming out, the *Normandie*, and we hoped to try our paces against her across the Atlantic. By this time I was feeling drowsy, as, in anticipation of successful trials, we had had a launching dinner the night before, which was attended by everyone who had anything to do with the building of the vessel; and the foreman of each department (and there were many) stood up and spoke.

I had met and grown fond of all these chaps during the months we built this ship, and thoroughly enjoyed the dinner, and even after it was over I stayed yarning with them all, until the time came for launching, and so had had no sleep at all. There were two principal reasons that made the dinner enjoyable to me. One was, that having worked with these men for months on end, it was nice to play with them, if only for an evening. The other, that it was fascinating to hear the different views on the changes that have taken place in the world of shipping from such men as Noah, who was the foreman shipwright, and Jonah, foreman plumber; Job, who, with his patience and philosophy, was chief of the correspondence department, was most interesting and entertaining, and the wisdom and mirth of these and many others made the night all too short. For I knew that this was really a farewell dinner, as on the morrow we would be sailing, and I should be returning to the earth. So I felt tired as the day drew on, and was only too pleased to turn in at Belfast's suggestion, for we had first to sail through space back to the earth, and, as Belfast pointed out, I should be no good to them at all during the sail through space, but would be a great help to him later on, as I was to be mate when we reached the earth and started to sail on the North Atlantic Ocean. I therefore saw nothing of the way in which the ship increased her speed to leave the water and sail through the air to the earth. And when I woke up she was descending through the clouds, with Portland Bill just visible.

We came down and touched the water lightly off Anvil Point, her speed easing up all the while, so that when finally she was floating and sailing at her designed water-line, we were only doing some 15 knots.

With a northerly wind we ran quietly across Channel to Havre, and lay-to off the mouth of the Seine, with our reaching sails on the deck ready to set. For the *Normandie* with shrieking sirens was heralding her approach, on her maiden trip across the Atlantic, and if we were to beat her, we knew we would have to set our light weather sails, for the wind then blowing was quite moderate in its strength.

The *Normandie* looked a fine sight as she came out, being so well designed that she did not look at all large or cumbersome in spite of her gigantic proportions. At first she moved quite slowly, and so, laying a course parallel to hers, to weather, we held her with our ordinary sails set; but though the four angels, who controlled the four winds of heaven, had promised us ideal conditions for this race as far as wind went, we could not be contented to let our ship loaf along while the *Normandie* warmed her engines up, for we knew she had a steady 30 knots tucked away in her hull, and that while we could do 33 knots, this depended upon the strength and direction of the wind and upon us aboard only. We had to set the best sails for the wind prevailing. So we set to work and soon had our ship clothed from bow to stern in her light muslin, and our speed, increasing with each sail set, was soon up to its maximum of 33 knots, and we leapt away from the *Normandie*. We were amused to see the officers on her bridge studying the wave we made as it rolled towards them, for though we did not make a lot of fuss, our wave was visible on such a quiet day, and I expect they put this down to some mammoth whale, for our heavenly ship was invisible to their eyes.

At 33 knots we reached down Channel and started on our Great Circle course for New York. But though at first we gradually dropped the *Normandie*, the speed at which the gap between us widened grew less, until we hardly widened it at all.

All went well until we were out in the open Atlantic, and then, with the wind and sea increasing, we had to take the sails off her. This was easy until it came to the shifting of our largest sail, the balloon wishbonesail set on the foremast; and though we set the ordinary wishbonesail and the main staysail to windward of it to ease the wind on it, this sail took charge and flogged about so much, that we had to run dead before the wind some two hours before we could get it in. As we were now going 20 knots, this put us 40 miles to leeward of our course.

Although we could lay our course close hauled, we were afraid of being to leeward of our line. For though the angels had promised us every help, they had insisted on our keeping the steamship course to New York; and so we made two tacks to the northward to get back on to this course, and were dismayed to see the *Normandie* hull down ahead.

Though the wind was strong we were only travelling at 28 knots now that we were reaching on our course, for we were afraid to set our largest sail, the fore balloon wishbonesail. But we set our great reaching jib and the main and mizen balloon staysails, these three being quite enough for us in the way of light sails. With our decks awash, we started overhauling the *Normandie* and, as we were now travelling at 33 knots, after twenty-four hours of such sailing we pulled up abreast of her. The wind now had increased, so, setting the forestaysail and the jib-topsail, we stowed our great reaching jib. Even then we had too much sail, for her lee decks were constantly awash in the squalls, so we took in our main and mizen balloon staysails, after setting the ordinary staysails to weather, and with an increasing wind and sea, maintained our maximum speed all the way to New York, arriving there some hours ahead of the *Normandie*, and so able to see the welcome given her by New York. And we chuckled to think what sort of welcome sailors of America would have given us had they known we were there, and had beaten the *Normandie* across the Atlantic, boat for boat.

All of us stayed aboard at New York, except one or two who had lived there, these being our spar makers, and they had a look round their old town while we jilled about outside waiting for the return of the *Normandie*. During this time we changed various things on board, such as leads, for we knew the race back would be a sterner one, as *Normandie* would now have run her engines in, and would be more sure of them. It was with delight therefore that we saw the wind swing in to the south-west and hold there. We knew that the four angels were looking after us, for this meant that we would be on the same tack as we were coming across, and that though the wind was on the quarter, our speed would bring it more on the beam.

As the *Normandie* came out, we, to windward of her, started putting more and more sail on our ship until we had her travelling at her maximum speed again. But with this strong wind, we did not set our large reaching jib, neither did we set the balloon wishbonesails; instead we had the jib-topsail, the ordinary wishbonesail and mizen, and the three reaching staysails set. Under this rig we made short miles of it across the Atlantic, slowly dropping the *Normandie* all the while, and though at one time she more than held us, for through one whole day she was driven all out, she never caught us. After an exciting passage across, with

Normandie in sight all the while, and we with all the wind we could carry, constantly shifting sails, changing our balloon staysails for working staysails and then back again, we finally arrived off the Isle of Wight with a strong lead. Knowing that the *Normandie* would go round Spithead, and that we could easily beat her to her anchorage off Ryde, we slipped up through the Needles, and anchored off Cowes some four hours before the *Normandie* dropped her anchor in Spithead.

Belfast and Yarborough said they would come ashore for a walk along the front with me. And so we wandered around Cowes, the three of us, all highly delighted with our ship and our effort; but I was a little sad, for I was to see her no more, but must return home to work.

We at length returned to the longboat by the squadron steps, and I knew that I must say farewell to my companions, and to *The Ship*, which was riding proudly at anchor.

Reluctantly I handed back the spots which were still fitted to my eyes, and as Belfast took them in his hand, he and Yarborough disappeared.

I gazed out into the Roads. *The Ship* had melted into the night, but away to the eastward twinkled the lights of the *Normandie*.

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